

Access DB# 66327

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Julie Anne Watko Examiner #: 77602 Date: 05/08/2002
 Art Unit: 2652 Phone Number 305-7742 Serial Number: 09624798
 Mail Box and Bldg/Room Location: CPL-6D06 Results Format Preferred (circle): PAPER DISK E-MAIL
4D22 hallway

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Reconfigurable Cartridge Processing Module for Storing Cartridges

Inventors (please provide full names): Coffin, Paul C. Receiving Devices in a
Schmidtke, Gregg + Luffel, Robert Data Storage System

Earliest Priority Filing Date: 07/24/2000

(due date June 19th)

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please see attached

May 9 2002
19:30

was there
List - Lisa Z.
Upgrade - in drives

SF - un

STAFF USE ONLY

Searcher: Paula Reynolds

Searcher Phone #: 305 0255

Searcher Location: PL 3A3

Date Searcher Picked Up: 5-20

Date Completed: 5-20

Searcher Prep & Review Time: 114

Clerical Prep Time: _____

Online Time: 124

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) _____

Bibliographic ☒

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN _____

Dialog ☒

Questel/Orbit _____

Dr. Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet ☒

Other (specify) CP-Name.com

File 344:CHINESE PATENTS ABS APR 1985-2002/APR
(c) 2002 EUROPEAN PATENT OFFICE
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)
(c) 2002 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2002/May W01
(c) 2002 European Patent Office
File 349:PCT FULLTEXT 1983-2002/UB=20020516,UT=20020509
(c) 2002 WIPO/Univentio
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200231
(c) 2002 Thomson Derwent

Set	Items	Description
S1	60	AU=(COFFIN P? OR COFFIN, P? OR SCHMIDTKE G ? OR SCHMIDTKE, - G? OR LUFFEL R? OR LUFFEL?, R?)
S2	48	S1 AND CARTRIDGE?
S3	2	S2 AND RECONFIG?

3/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01386479

Reconfigurable cartridge processing module for storing cartridge
receiving devices in a data storage system
Rekonfigurierbares Kassettenverarbeitungsmodul zur Speicherung von
Kassettenaufnahmeverrichtungen in ein Datenspeichersystem
Module reconfigurable de traitement de cartouches pour stocker des
dispositifs de reception de cartouches dans un systeme de stockage de
donnees

PATENT ASSIGNEE:

Hewlett-Packard Company, (206037), 3000 Hanover Street, Palo Alto, CA
94304, (US), (Applicant designated States: all)

INVENTOR:

Coffin, Paul C., 1816 Serramonte Drive, Fort Collins, CO 80524, (US)

Schmidtke, Gregg S., 4607 Kitchell Way, Fort Collins, CO 80524, (US)

Luffel, Robert W., 1520 42ND Avenue Court, Greeley, CO 80634, (US)

LEGAL REPRESENTATIVE:

Jackson, Richard Eric et al (62281), Carpmiels & Ransford, 43 Bloomsbury
Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1176597 A2 020130 (Basic)

APPLICATION (CC, No, Date): EP 2001305435 010622;

PRIORITY (CC, No, Date): US 624798 000724

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-033/12

ABSTRACT WORD COUNT: 197

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200205	652
SPEC A	(English)	200205	7353
Total word count - document A			8005
Total word count - document B			0
Total word count - documents A + B			8005

Reconfigurable cartridge processing module for storing cartridge
receiving devices in a data storage system
Module reconfigurable de traitement de cartouches pour stocker des
dispositifs de reception de cartouches dans un systeme...

INVENTOR:

... US)

Luffel, Robert W ...

...ABSTRACT A2

A reconfigurable cartridge processing module (10) for use in a data
storage system may comprise a frame (18...

...12) and a second component configuration (14). In the first component
configuration (12), a first cartridge receiving device (34) is mounted
to a first set (28) of the plurality of sets of mounting locations (28,
30, 32) provided on the frame (18) so that the first cartridge
receiving device (34) is located at a first position (38) within the
frame (18). A second cartridge receiving device (36) is mounted to a
second set (30) of the plurality of sets of mounting locations (28, 30,
32) provided on the frame (18) so that the second cartridge receiving
device (36) is located at a second position (40) within the frame (18).
In the second component configuration (14), a third cartridge receiving
device (46) replaces the first and second cartridge receiving devices
(34, 36) and is mounted to a third set (32) of the plurality...

...SPECIFICATION A2

Field of Invention

This invention relates to **cartridge** storage systems in general and more specifically to a **cartridge** storage system having a **reconfigurable cartridge** processing module.

Background

Many different types of data storage systems exist and are being used to store data **cartridges** at known locations and to retrieve those data **cartridges** from the storage locations so that data may be written to or read from those data **cartridges**.

A typical data storage system may include one or more **cartridge** receiving devices for holding the various data **cartridges**. For example, one type of **cartridge** receiving device may comprise a **cartridge** storage rack or "magazine" while another type of **cartridge** receiving device may comprise a **cartridge** read/write device. **Cartridge** read/write devices come in various sizes including full-width **cartridge** read/write devices and, more recently, half-width **cartridge** read/write devices.

The data storage system may also be provided with a **cartridge** access device for accessing the various data **cartridges** contained in the various **cartridge** receiving devices. The data storage system may also include a **cartridge** positioning system that is operatively associated with the **cartridge** access device. The **cartridge** positioning system is used to move the **cartridge** access device among the various **cartridge** receiving devices, thereby allowing the **cartridge** access device to access the data **cartridges** that may be contained in the various **cartridge** access devices. Typically, when certain data contained on a particular data **cartridge** is desired, a host computer system will issue a command to a control system associated with the data storage system. The control system then actuates the **cartridge** positioning system which moves the **cartridge** access device along the **cartridge** storage magazines until the **cartridge** access device is positioned adjacent the desired data **cartridge**. The **cartridge** access device then removes the data **cartridge** from the **cartridge** storage magazine and carries it to the **cartridge** read/write device. Thereafter, **cartridge** access device inserts the selected data **cartridge** into the **cartridge** read/write device so that the host computer may read data from or write data to the selected data **cartridge**. After the read/write operation is complete, the **cartridge** access device may remove the data **cartridge** from the **cartridge** read/write device and return it to its appropriate location in the **cartridge** storage magazine.

3/3,K/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

014409171 **Image available**
WPI Acc No: 2002-229874/200229
XRPX Acc No: N02-176820

Reconfigurable cartridge processing module for cartridge storage system, has frame defining component configurations having several sets of mounting locations for mounting corresponding cartridge receiving devices

Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: COFFIN P C; LUFFEL R W ; SCHMIDTKE G S
Number of Countries: 026 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1176597	A2	20020130	EP 2001305435	A	20010622	200229 B

Priority Applications (No Type Date): US 2000624798 A 20000724
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1176597	A2	E	18	G11B-033/12	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI TR

Reconfigurable cartridge processing module for cartridge storage system, has frame defining component configurations having several sets of mounting locations for mounting corresponding cartridge receiving devices

...Inventor: LUFFEL R W ...

... SCHMIDTKE G S

Abstract (Basic):

... 18) defines the component configurations having several sets of mounting locations for mounting the corresponding cartridge receiving devices in the corresponding positions within the frame.

... An INDEPENDENT CLAIM is also included for reconfigurable cartridge processing method...

...For cartridge storage system...

...The cartridge storage capacity is increased without adding any additional volumetric space to the system. The module can be reconfigured easily and simply...

...The figure shows a perspective view of the reconfigurable cartridge processing module...

... Cartridge receiving device (36
Title Terms: CARTRIDGE ;

Set	Items	Description
S1	15461	DIS??? (3N) DRIVE?
S2	9085	S1 AND (TWO OR 2)
S3	6268	S1 AND (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	25456	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	20450	OCCUP? OR SITTING OR INSTALL?
S6	68	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S7	2331	MODULAR? OR INTERCHANG?
S8	2409	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S9	97	S1 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S10	10573	(LISA? OR APPLE) (3N) COMPUTER?
S11	0	AU=(COFFIN P? OR COFFIN, P? OR SCHMIDTKE G ? OR SCHMIDTKE, - G? OR LUFFEL R? OR LUFFEL?, R?)
S12	0	(S2 OR S3) AND S4 AND S5 AND S6
S13	0	S1 AND (S4 OR S5) AND S6
S14	510	S1 AND S10
S15	84	S14 AND S4
S16	3	S15 AND S7
S17	3	RD S16 (unique items)
S18	2	S9 AND LISA?
S19	2	RD S18 (unique items)
S20	0	S15 AND S6
S21	0	S8 AND S4 AND S5 AND S6 AND S7
S22	14	S9 AND S4
S23	12	S22 NOT PY=>2001
S24	12	S23 NOT (S16 OR S18)
S25	11	RD S24 (unique items)

17/3,K/1

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00342233 94MA03-202

Modular AV Mac due in Q3 -- Low-cost 68K unit has flexible design

Gore, Andrew

MacWEEK , March 21, 1994 , v8 n12 p1, 103, 2 Page(s)

ISSN: 0892-8118

Company Name: **Apple Computer**

Modular AV Mac due in Q3 -- Low-cost 68K unit has flexible design

Company Name: **Apple Computer**

Announces that **Apple Computer** Co., Cupertino, CA, plans to introduce a low-cost, **modular** desktop machine (\$1500) that sources describe as the 'Mac chameleon.' Says it's a 33-MHz 68LC040-based machine with 4MB RAM, 250MB hard **disk** , CD-ROM **drive** , 14-inch color monitor, and keyboard. Features include a convertible chassis that gives it the...

...the direct-connect design of the logic board allows for many cost-saving features; and **upgrading** to a PowerPC 603-based version will also be inexpensive (\$500). Includes diagram of expansion...

Descriptors: Macintosh; 68040; **Apple Computer** Co.; Add-on; Portable; Expansion Slot; Product Development

Identifiers: **Apple Computer**

17/3,K/2

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00221199 90MA07-416

Apple survey for modular Mac owners ready for System 7.0 BusinessWatch

Welch, Nathalie

MacWEEK , July 31, 1990 , v4 n26 p128, 1 Pages

ISSN: 0892-8118

Apple survey for modular Mac owners ready for System 7.0 BusinessWatch

Reports on a survey conducted by **Apple Computer** Co. on nearly 2,000 Mac users in five countries showed that a majority of...

...System 7.0. Says that already 1/3 of compact Macintoshes and 4/5 of **modular** Macintoshes already have the 2 MB of memory required to run System 7.0. Says also that while 90% of Mac users regardless of configuration have a hard **disk drive** , 14% of **modular** Mac and 9% of compact Mac users have both internal and external drives. Includes four...

Descriptors: Survey; Memory; Hard **Disk Drive** ; **Apple Computer** Co.; User; Macintosh; **Upgrade**

Identifiers: **Apple Computer**

17/3,K/3

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00194310 89MU06-014

Apple Mac IIcx: the modular Macintosh

Anderson, John J

MacUser , June 1, 1989 , v5 n6 p120-128, 7 Pages

ISSN: 0884-0997

Apple Mac IIcx: the modular Macintosh

Describes the Macintosh IIcx (\$4,469), the first **modular** Macintosh from **Apple Computer** . The base configuration includes a 15.7 MHz 68030 microprocessor with built-in PMMU, a...

...SIMM RAM (expandable to 8MB). It also comes standard with the 1.4MB FDHD floppy **disk drive** , three NuBus slots, and 'the usual set of built-in

ports.'' The power switch can...

... removed after taking out one screw inside the case, which will make repair and RAM- **upgrade** much simpler. Includes a benchmark test comparing the IICx with other Macintosh models as well...

Identifiers: Macintosh IICx; **Apple Computer**

19/3,K/1

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00203723 89MA10-024

Apple, early officers face trial over Twigg

Said, Carolyn

MacWEEK , October 3, 1989 , v3 n35 p67, 1 Pages

ISSN: 0892-8118

Apple, early officers face trial over Twigg

...ruled that a jury must give the decision whether Apple's 'unqualified optimism' for the **Twigg disk drive** may be blamed for the financial setback that investors suffered when the **disk drive** failed to generate enough consumer following. The ruling also said that a similar Apple stance with the failed **Lisa** machine was not legally misleading. (rqe)

19/3,K/2

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00202507 89IW10-431

Apple uses clippings in shareholder suit

Parker, Rachel

InfoWorld , October 30, 1989 , v11 n44 p46, 1 Pages

ISSN: 0199-6649

... against Apple Computer. The shareholders alleged that Apple Computer made false and misleading statements about **Lisa** . They claimed that they relied on Apple's optimistic predictions about **Lisa** 's and **Twigg** 's prospects when buying company stock. Notes that **Lisa** was not a success and its stock dropped from \$63 per share to about \$17...

...s favor. However the shareholders will continue the trial to address the issue of the **Twigg hard disk drive** . (lj)

25/3,K/1

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00531313 99PW04-024

Iomega Klik offers small size, large storage

Lasky, Michael S

PC World , April 1, 1999 , v17 n4 p88, 1 Page(s)

ISSN: 0737-8939

Company Name: Iomega

URL: <http://www.iomega.com>

Product Name: Iomega Klik Drives

... Klik Drives (\$199 to \$299 street) from Iomega (800). Says that its matchbook-size, biscuit- **thin** disks hold 40MB of data. Adds that the \$10 disks act like miniature hard drives...

... designed primarily for use with digital cameras and driveless handheld PCs. Adds that Klik will **replace** the more expensive CompactFlash cards currently used by most digital cameras. Advises waiting until they...

Descriptors: Hard **Disk Drive** ; Information Storage; Mass Storage; Peripherals; Digital Camera; Removable

25/3,K/2

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00529158 99TL03-003

Stretching your technology resources -- These days, computers and software applications are becoming obsolete faster than we can learn about them. How can schools ...

Carter, Kim

Technology & Learning , March 1, 1999 , v19 n7 p22-30, 8 Page(s)

ISSN: 1053-6728

... thinking on a variety of strategies for schools to consider when dealing with archaic equipment- **replacement** needs. Offers a closer look at six strategies, including allocating financing for technology on an ongoing basis as outlined by a technology plan, considering leasing contracts, considering **upgrading** options such as RAM, CPU, or **disk drive upgrades** , using the **thin** -client concept of networking fewer computers to a powerful Internet-based server, rethinking expectations and...

25/3,K/3

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00514211 98IW11-209

Notebooks worth the weight -- Toshiba Tecra 8000

Kvitka, Andre

InfoWorld , November 16, 1998 , v20 n46 p154-155, 2 Page(s)

ISSN: 0199-6649

Company Name: Toshiba America Information Systems

URL: <http://www.toshiba.com>

Product Name: Toshiba Tecra 8000

...to 256MB, an 6.4GB hard drive, 24X CD-ROM with optional DVD, diskette hot- **swappable** with CD-ROM, and graphics. Weighs 6.1 pounds with battery and power supply that last nearly 3 hours and 24 minutes. Says that the **thin** case makes the notebook easy to carry. Criticizes the TrackPoint as being difficult to use...

Descriptors: Laptop Computers; Hard **Disk Drive** ; CD-ROM; Portable Computer; Pentium II; Color

25/3,K/4

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00492454 98IW04-306

Featherweight ThinkPad boasts heavy-duty power

Kvitka, Andre

InfoWorld , April 27, 1998 , v20 n17 p12, 1 Page(s)

ISSN: 0199-6649

Company Name: IBM Corp.

URL: <http://www.ibm.com/thinkpad>

Product Name: IBM ThinkPad 600

... lightweight system. Base configuration features a 266MHz Mobile Pentium II processor, 32MB RAM, 4GB hard disk, internal swappable disk drive or CD-ROM drive, 56Kbps modem, and 13.3-inch Thin Film Transfer display. Notes its impressive, innovative design. Says that it is highly manageable, with...

25/3,K/5

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00477311 97PJ11-022

RAIDstation Kit (DPT-RS3W/UR)

Sundeen, Jim

PC Today , November 1, 1997 , v11 n11 p46, 1 Page(s)

ISSN: 1040-6484

Company Name: Distributed Processing Technology

URL: <http://www.dpt.com>

Product Name: DPT-RS3W/UR RAIDstation Kit

... 407). Calls it ``inexpensive, reliable, and compact.'' Explains that there are two versions, one for ~~narrow and ultra-narrow drives~~, and the version tested which is designed for ~~wide and ultra-wide drives~~. Includes ...

... with 4MB cache, and external SCSI cable. Reports the results of testing using three ~~hot-swappable~~, 4.58GB Ultra-Wide drives. Says it is easy to install, format, and administer. Reports...

Descriptors: RAID; Backup; Hard Disk Drive

25/3,K/6

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2002 Info. Today Inc. All rts. reserv.

00438818 96PK10-017

NCs: coming soon to a desktop near you? -- The so-called thin clients have a lot to offer, but the jury's out on whether such devices can overthrow the PC

Korzeniowski, Paul

PC WEEK , October 7, 1996 , v13 n40 pN18-N22, 3 Page(s)

ISSN: 0740-1604

NCs: coming soon to a desktop near you? -- The so-called thin clients have a lot to offer, but the jury's out on whether such devices...

... maintain, simpler to develop software for, and less expensive than PCs, but lack a hard disk, floppy drive, and CD-ROM drive. Claims that instead of having to develop software for specific OSes...

... of their features. Nevertheless, calls NCs a sound alternative for remote offices, telecommuting, short-term replacement of PCs that are down, and other applications in which PCs may be too costly...

25/3,K/7

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00234646 91LA02-005

Dayna announces slew of Mac connectivity products New Etherprint Plus convert Ethertalk to Localtalk

St. Clair, Melanie

LAN Times , February 4, 1991 , v8 n3 p40-41, 2 Pages

ISSN: 1040-5917

Company Name: Dayna Communications

Product Name: Etherprint Plus; Daynafile; Daynashare

... Says that Etherprint is made up of box with a Localtalk port; a built-in **thin** Ethernet transceiver and an Attachment Unit Interface (AUI) port; a separate Etherprint-T Plus model...

... all devices with the exception of routers are supported. Also announces Daynafile II, (\$599) an **upgrade** of its external 3.5- and 5.25-inch floppy **disk drive** for the Mac, which comes with the latest version of the DOS Mounter software; and...

Descriptors: Networks; Conversions; Floppy **Disk Drive** ; Utility Program; Consumer Information

25/3,K/8

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00205426 89PK11-076

Hauppauge Computer Works Inc., 386 Motherboard

Claiborne, David

PC WEEK , November 6, 1989 , v6 n44 pS/36, 1 Pages

ISSN: 0740-1604

Presents favorable review of the 386 Motherboard (\$1,695), a 20MHz 386 system- **replacement** board for the PC AT, from Hauppauge Computer Works Inc. of Hauppauge, NY (516). Says...

...the AT. Slots 5,6,7 and 8 were designated as 16-bit, preempting the **disk - drive** controller cable problem. Slot 1 may be used as 32-bit for memory boards conforming...

...during one-year warranty period. Says just about the only problem is the board's **narrow** width which leaves one edge unsupported. (jvt)

Descriptors: Board; 80386; **Upgrade** ; Hardware Review

25/3,K/9

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00172809 88PR07-002

The empire strikes back IBM's latest PS/2 machine is a solid performer, designed to put the competition back in its place.

Dubash, Manek

Practical Computing , July 1, 1988 , v11 n7 p39-42

... application software. Documentation is considered inadequate for a machine of this complexity. Notes that the **disk drive** controller is mounted on the drive itself, which will effectively limit disk **upgrades** to IBM hard disks, as there is not enough room in the computer for a second drive. Two sidebars discuss Micro Channel Architecture and **thin** film head technology. Includes benchmark test results. Contains one photo. (djd)

25/3,K/10

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00152356 87PS09-011

Multiplan, version 2.0

Hicken, Sam

Profiles , Sep 1987 , v5 n2 p57-58, 2 Pages

ISSN: 8755-464X

... spreadsheet package from Microsoft Corp. of Bellevue, WA (800). It requires 128K and one floppy **disk drive** to run on an IBM PC, XT, AT or compatible. Says that it allows 4...

... structured documentation. Notes that it lacks graphics and database functions, and does not allow columns **narrower** than three characters. Scorecard: gd-vg-vg-vg-ex. (lj)

Descriptors: SPREADSHEET; SOFTWARE REVIEW; **UPGRADE**

25/3,K/11

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00133390 86PD12-002

IBM XT 286

Jackson, Peter

Personal Computer World , Dec 1986 , v9 n12 p130-138, 5 Pages

... that it comes with the 80286 processor, 640K RAM, 64K ROM, a 1.2M floppy **drive** , a 20M hard **disk** , the IBM extended keyboard, and PC-DOS 3.2. Says that it was designed to compete with the inexpensive AT compatibles as well as cheap **upgrade** products, but that the market for the XT 286 looks **narrow** and as if it won't last very long. Recommends that users purchase an inexpensive...

?

File 2:INSPEC 1969-2002/May W3
(c) 2002 Institution of Electrical Engineers
File 6:NTIS 1964-2002/Jun W1
(c) 2002 NTIS, Intl Cpyrght All Rights Res
File 8:Ei Compendex(R) 1970-2002/May W3
(c) 2002 Engineering Info. Inc.
File 34:SciSearch(R) Cited Ref Sci 1990-2002/May W3
(c) 2002 Inst for Sci Info
File 35:Dissertation Abs Online 1861-2002/Apr
(c) 2002 ProQuest Info&Learning
File 65:Inside Conferences 1993-2002/May W2
(c) 2002 BLDSC all rts. reserv.
File 77:Conference Papers Index 1973-2002/Mar
(c) 2002 Cambridge Sci Abs
File 94:JICST-EPlus 1985-2002/Mar W5
(c)2002 Japan Science and Tech Corp(JST)
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Apr
(c) 2002 The HW Wilson Co.
File 144:Pascal 1973-2002/May W3
(c) 2002 INIST/CNRS
File 238:Abs. in New Tech & Eng. 1981-2002/May
(c) 2002 Reed-Elsevier (UK) Ltd.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
File 108:AEROSPACE DATABASE 1962-2002/MAY
(c) 2002 AIAA
File 583:Gale Group Globalbase(TM) 1986-2002/May 18
(c) 2002 The Gale Group

Set	Items	Description
S1	25290	DIS??? (3N)DRIVE?
S2	7953	S1 AND (TWO OR 2)
S3	6309	S1 AND (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	716531	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	997812	OCCUP? OR SITTING OR INSTALL?
S6	20084	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S7	188364	MODULAR? OR INTERCHANG?
S8	23333	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N)COMPONENT??
S9	1489	S1 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S10	8436	(LISA? OR APPLE) (3N)COMPUTER?
S11	195	AU=(COFFIN P?OR COFFIN, P? OR SCHMIDTKE G ? OR SCHMIDTKE, - G? OR LUFFEL R? OR LUFFEL?, R?)
S12	1	(S2 OR S3) AND S4 AND S6
S13	0	S3 AND S5 AND S6
S14	267	S10 AND S1
S15	1	S14 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S16	1	S15 NOT S12
S17	1	S4 AND S1 AND S6
S18	0	S17 NOT (S12 OR S15)
S19	0	S4 AND S8 AND S6
S20	1	S9 AND S10
S21	0	S20 NOT (S12 OR S15)
S22	0	S11 AND (S1 OR S8)
S23	0	LISA? AND TWIGGY
S24	18	S14 AND S4
S25	18	S24 NOT (S12 OR S15 OR S20)
S26	18	RD S25 (unique items)
S27	1	S14 AND S4 AND S7
S28	0	S27 NOT (S24 OR S12 OR S15 OR S20)

12/3,K/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
(c) 2002 Engineering Info. Inc. All rts. reserv.

03650700 E.I. No: EIP93040758744

Title: Diffractive optical system for tracking on Floptical disks

Author: Farnsworth, Stephen W.; Wilson, Scott D.; Cohn, Brian D.

Corporate Source: Bernoulli Optical Systems Co., Boulder, CO, USA

Conference Title: Design of Optical Instruments

Conference Location: Orlando, FL, USA Conference Date:
19920422-19920424

E.I. Conference No.: 17506

Source: Proceedings of SPIE - The International Society for Optical
Engineering v 1690 1992. Publ by Int Soc for Optical Engineering,
Bellingham, WA, USA. p 72-79

Publication Year: 1992

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-0855-7

Language: English

Abstract: The Floptical 3 .5 inch floppy **disk drive** uses optical
track sensing for 'Very High Density' (VHD) mode, and is also downward
compatible...

...projecting - with very long depth of focus - a patch of sinusoidal
grating pattern with the **same spacing** as the VHD tracks onto the disk
surface, and detects the amount of reflected light...

...signals. Utilization of a laser diode provides high signal levels. A
computer generated binary hologram **replaces** several conventional optical
elements. The HOE is replicated at much lower cost than conventional optics

...

?

16/3,K/1 (Item 1 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

04716260

Apple Computer Co. Settles Holder Suits for USDlr19.8 Million
US - APPLE SETTLES SHAREHOLDER LAWSUITS
Wall Street Journal Europe (WSJ) 24 December 1991 p4

Apple Computer Co. Settles Holder Suits for USDlr19.8 Million

Apple Computer, **computer** concern, has announced that it has settled
for USDlr19.8 mil two shareholder lawsuits. The...

... which a US court jury found that investors had been misled about the
prospects for ' **Twiggy** ', a **disk - drive** product which flopped and was
axed. The other suit related to a charge that the...

COMPANY: **APPLE COMPUTER**

26/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03591419 INSPEC Abstract Number: C90027135

Title: Optical disk daze

Author(s): Pournelle, J.

Journal: BYTE vol.15, no.2 p.99-114

Publication Date: Feb. 1990 Country of Publication: USA

CODEN: BYTEDJ ISSN: 0360-5280

Language: English

Subfile: C

...Abstract: WORM (write once, read many times), DESQview multi-windowing program, XTreePro Gold and Norton Commander **disk drive** manager facilities, Macintosh CD-ROMs, Grammatic IV grammar and style program, Crescent Software's PDQ **replacement** linking library for QuickBASIC versions 4.0 and higher, Quicksort's PE Browse sharewave, Broderbund...

Descriptors: **Apple computers** ;

...Identifiers: **disk drive** manager facilities...

...PDQ **replacement** linking library

26/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03423750 INSPEC Abstract Number: C89048564

Title: Apple introduces the Macintosh IICx

Author(s): Magid, L.J.

Journal: Andrew Seybold's Outlook on Professional Computing vol.7, no.8 p.9-11

Publication Date: 20 March 1989 Country of Publication: USA

CODEN: ASOCE4 ISSN: 0895-3821

Language: English

Subfile: C

...Abstract: the ROMs are on removable single inline memory modules (SIMMs) so that they can be **replaced** by a dealer or user. From the user's standpoint, the most obvious new feature is Apple's so-called 'SuperDrive.' The new floppy **disc drive** stores 1.44 megabytes of data (previous Macs were 800 K). Moreover, it also reads...

Descriptors: **Apple computers** ;

...Identifiers: floppy **disc drive** ;

26/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03159188 INSPEC Abstract Number: C88040234

Title: Remaking a classic (Apple laser printers)

Author(s): Franklin, C., Jr.

Journal: BYTE vol.13, no.5 p.134-41

Publication Date: May 1988 Country of Publication: USA

CODEN: BYTEDJ ISSN: 0360-5280

Language: English

Subfile: C

...Abstract: IISC (\$4599) but adds PostScript and AppleTalk networking capabilities. The IINT is the most direct **replacement** for the discontinued LaserWriter Plus. At the top of the line, the LaserWriter IINTX (\$6399) gives PostScript, AppleTalk networking, 2 megabytes of memory (expandable to 12 megabytes), hard **disk drive** expansion capability, and a motorola 68020 processor.

Descriptors: **Apple computers** ;

...Identifiers: hard disk drive expansion capability...

26/3,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03141890 INSPEC Abstract Number: C88036123

Title: The use of microcomputers in recording movements of books in Nigerian university libraries

Author(s): Alabi, G.A.

Author Affiliation: Dept. of Libr. Studies, Ibadan Univ., Nigeria

Journal: Revista AIBDA vol.8, no.1 p.25-9

Publication Date: Jan.-June 1987 Country of Publication: Costa Rica

CODEN: REVADJ ISSN: 0250-3190

Language: Spanish

Subfile: C

...Abstract: cost of the mechanical process as compared with manual methods. The system runs on an **Apple II computer** with 48 kB of memory and two **disc drives**, with appropriate peripherals, and comprises 4 programs, which are listed. There are 5 main files...

... costs are scant, but the system gives more satisfaction than the manual one that it **replaces**.

Descriptors: **Apple computers** ;

...Identifiers: **Apple II computer** ;

26/3,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03004108 INSPEC Abstract Number: C87065293

Title: Apple announces the Mac II and the Mac II/6. A new generation of Macs; what's new in electronic publishing; the coming of hypertext

Author(s): Press, L.

Journal: Abacus vol.4, no.4 p.58-62

Publication Date: Summer 1987 Country of Publication: USA

CODEN: ABACEJ ISSN: 0724-6722

Language: English

Subfile: C

...Abstract: reviews Apple's Macintosh II and Macintosh SE (System Expansion). The Mac SE is an **upgrade** of the Mac Plus. It adds an expansion slot for a plug-in board and two internal **disk drives**, one of which can be a 20-Mb hard disk. The ROM has been rewritten...

Descriptors: **Apple computers** ;

...Identifiers: internal **disk drives** ;

26/3,K/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

02981059 INSPEC Abstract Number: D87002689

Title: The newest microcomputers: strategies for Macintosh owners

Author(s): Lu, C.; Chu, E.W.

Journal: High Technology vol.7, no.8 p.48-9

Publication Date: Aug. 1987 Country of Publication: USA

CODEN: HTECD3 ISSN: 0277-2981

Language: English

Subfile: D

...Abstract: Its most significant new features are a single expansion slot and provision for two internal **disk drives**. The SE runs the core 1987 software, but it will begin to fade in late...

... hardware may not be able to accommodate the newest software. If you choose not to **upgrade** , you will eventually be closed out of new developments.

Descriptors: **Apple computers** ;
...Identifiers: **internal disk drives** ;

26/3,K/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

02661522 INSPEC Abstract Number: D86001445

Title: The big apple at last! (Apple Mac plus)

Author(s): Kemp, A.

Journal: What Micro p.28-30

Publication Date: April 1986 Country of Publication: UK

CODEN: WHMID6 ISSN: 0264-441X

Language: English

Subfile: D

...Abstract: which is increased from 512 K to 1 M. The second difference is in the **disk drives** . They now accept the double-sided format that holds 800 K as opposed to the...

...difference in the new machine is that the old 64 K ROM chips have been **replaced** by 128 K of ROM, which holds a new, faster and more efficient system of...

Descriptors: **Apple computers** ;
...Identifiers: **disk drives** ;

26/3,K/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

02491023 INSPEC Abstract Number: D85002097

Title: Software packages assist diverse needs of bond portfolio managers

Journal: Wall Street Computer Review vol.2, no.8 p.61-5

Publication Date: June 1985 Country of Publication: USA

CODEN: WSCRDQ ISSN: 0738-4343

Language: English

Subfile: D

...Abstract: fixed-income managers. The series consists of the Fixed Income Portfolio Manager (\$2850), the Bond **Swap** Analyzer (\$1700), the Mortgage Calculator (\$1500), the Rate of Return Analyzer (\$1350), the Yield Calculator...

...on an IBM PC, XT, or AT with at least 128K of memory and two **disk drives** . A color graphics card is optionally required for a few graphic displays, and an 8087...

... mortgage calculator. A Hayes modem is required for the optional automatic price updates. The Bond **Swap** Analyzer and the Yield Calculator are also available on the **Apple computer** . The Multiple Bond Price/Yield Calculator and the Mortgage Backed Securities Calculator programs by Bond ...

... programs cost \$312.50 and operate on either an IBM PC with one double-sided **disk drive** and 128K of RAM, or an Apple II or III with at least 48K of...

...Identifiers: Bond **Swap** Analyzer...

... **disk drives** ; ...

... **Apple computer** ;

26/3,K/9 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

(c) 2002 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

1537269 NTIS Accession Number: ED-318 458

Obtaining Help with AppleWorks V2.0 Word Processing Files Using the Apple IIGS Computer . First Edition

Schlenker, R. M.

Dependents Schools (DOD), Washington, DC. Pacific Region.

Corp. Source Codes: 088749002

1989 56p

Languages: English

Journal Announcement: GRAI9101

For other titles in this series, see ED 304 090, ED 305 087 and ED 313 009.

Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110.

NTIS Prices: Not available NTIS

Obtaining Help with AppleWorks V2.0 Word Processing Files Using the Apple IIGS Computer . First Edition

... training device for obtaining help with AppleWorks version 2.0 word processing files using the **Apple IIGS computer** with two **disk drives**. Step-by-step instructions are provided for program loading; selecting the help list; and using...

...document, identify page break locations, move part or all of a document, change file names, **replace** words, set tabs, use bold face, use underline, move to the beginning of a file...

26/3,K/10 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

(c) 2002 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

1508317 NTIS Accession Number: ED-314 011

Obtaining Help with Appleworks V1.3 Word Processing Files Using the Apple IIe Computer . First Edition

Schlenker, R. M.

Dependents Schools (DOD), Washington, DC. Pacific Region.

Corp. Source Codes: 088749002

1988 58p

Languages: English

Journal Announcement: GRAI9015

Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110.

NTIS Prices: Not available NTIS

Obtaining Help with Appleworks V1.3 Word Processing Files Using the Apple IIe Computer . First Edition

... was developed as a 'how to' training device for word processing using AppleWorks on the **Apple IIe computer** with a Duodisk or two **disk drives**. Step-by-step instructions are provided for program loading, creating files, accessing and using the...

... text, deleting text, using the find option, inserting page breaks, changing file names, using the **replace** option, setting and removing tabs, and producing bold face text. For each procedure, a diagram...

26/3,K/11 (Item 3 from file: 6)

DIALOG(R)File 6:NTIS

(c) 2002 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

1486054 NTIS Accession Number: ED-309 743

Computers in Post-Secondary Developmental Education and Learning Assistance

Christ, F. L. ; McLaughlin, R. C.

Corp. Source Codes: 888888888

1987 10p

Languages: English

Journal Announcement: GRAI9008

Paper presented at the Annual Institute for Learning Assistance Professionals (4th, 1987).

Available from ERIC Document Reproduction Service (Computer Microfilm International Corporation), 3900 Wheeler Ave., Alexandria, VA 22304-5110.

NTIS Prices: Not available NTIS

...past two years in five areas: (1) hardware (microcomputer systems, low cost PC clones, combination **Apple** /PC machines, lab **computer** controllers for instructional management); (2) peripherals (large screen projection, high speed printers, ribbon re-inkers, oversize monitors, printer buffers, modems, mouse alternatives, scanners, mark sensing, hard **disk drives**, computer equipment security, screen readers for the blind, eye-movement recording systems, and learning center...

... professional associations and conferences. Current trends are then discussed, including software rental, software compatibility, computer **swap** meets, electronic universities, increased computer capacity, and expert systems; names and addresses of selected vendors...

26/3,K/12 (Item 1 from file: 238)

DIALOG(R)File 238:Abs. in New Tech & Eng.

(c) 2002 Reed-Elsevier (UK) Ltd. All rts. reserv.

0339488 ANTE NUMBER: 103601

Apple G4 Cube

AUTHOR(S): Joseph, C.

JOURNAL: Personal Computer World 23 (10) Nov 2000 p.66-7. il.

PUBLICATION YEAR: 2000

ISSN: 0142-0232

BLDSC SHELF MARK: 6427.860

LANGUAGE: English

ABSTRACT: ...with its own monitor and, like all Apple machines these days, it lacks a floppy **disk drive**. Also, Apple's range of monitors use a non-standard connector and graphics card options...

... and mostly aimed at non-technical users who do not want to get involved in **upgrades**.

DESCRIPTORS: ... **Apple Computer** ;

26/3,K/13 (Item 1 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

09668970

Apple Unveils Radical Design For the iMac

US: Apple to unveil new iMac desktop computer

Washington Post (YSF) 08 Jan 2002

Language: ENGLISH

Apple Computer is to unveil its new iMac desktop computer. It features a radical redesign with a...

...a basketball with a 15-inch LCD on a pivoting arm. The new product will **replace** its existing three-year old iMac computer whose sales have begun to slow. The new machine uses a G4 processor, features a **disk drive** that can record DVDs and costs US\$ 1,799. Other models costing US\$ 1,499 ...

COMPANY: **APPLE COMPUTER**

26/3,K/14 (Item 2 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

06643152

Apple drops from top in loyalty survey

US: APPLE HEADS DOWNWARDS IN LOYALTY STAKES
Wall Street Journal Europe (WSJ) 15 Jun 1998 p.14
Language: ENGLISH

Once the industry leader in the customer loyalty stakes, US **computer** manufacturer **Apple** has slipped into third place, behind Hewlett-Packard, now No. 2, and Gateway in top...

...price iMac machine will prove, owing to the lack of key features such as an **upgraded** modem and a floppy- **disk drive** .

26/3,K/15 (Item 3 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

05376297

Apple to peel wraps off new Mac PC range

UK - APPLE TO LAUNCH NEW PC RANGE
Computing (CNG) 1 October 1992 p3

Apple Computer will launch on 19 October 1992 a range of new PCs, targeted at bringing more...

... 16MHz and 33MHz respectively, priced from GBP1,495. The PowerBook 160 and 180 notebooks will **replace** the current 140 and 170 models. They will be priced from GBP1,600 and will include larger hard **disk drives** and battery life extended by around 1 h. The Macintosh Duo consists of a 4...

COMPANY: **APPLE COMPUTER**

26/3,K/16 (Item 4 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

05250291

Apple May Introduce New Notebook Models In Autumn, Some Say

US - APPLE EXPECTED TO LAUNCH NEW NOTEBOOKS IN AUTUMN 1992
Wall Street Journal Europe (WSJ) 12 August 1992 p9

Apple Computer (Cupertino, CA) is expected to launch four new notebook computer models in October 1992. As...

... a desktop console slot, whereupon they will act as desktops, enabling the use of extra **disk drives** . Apple's two higher-end PowerBook notebook models will be **replaced** by two other machines, priced at around the same price as those they **replace** . They will be up to 32% quicker than the firm's fastest existing notebook and...

COMPANY: **APPLE COMPUTER**

26/3,K/17 (Item 5 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

04826196

xxx

US - APPLE HAS FLOPPY DISK PROBLEMS ON POWERBOK
Computergram International (CGI) 13 January 1992 p1
ISSN: 0268-716X

Apple Computer has admitted that a startup production glitch has affected the floppy **disk drives** in the new portable PowerBook 140s and 170s to the point where the **disk drive** must be **replaced**. The internal floppy on some early production runs fails to operate unless screen brightness is...

COMPANY: **APPLE COMPUTER**

PRODUCT: MicrocomputersFloppy **Disk Drives**

26/3,K/18 (Item 6 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

03420367

APPLE COMPUTER LAUNCHES MACINTOSH AND COLOUR GRAPHICS BOARDS
US - **APPLE COMPUTER** LAUNCHES MACINTOSH AND COLOUR GRAPHICS BOARDS
EDN Magazine (EDNM) 29 March 1990 p21
ISSN: 0012-7515

APPLE COMPUTER LAUNCHES MACINTOSH AND COLOUR GRAPHICS BOARDS
US - **APPLE COMPUTER** LAUNCHES MACINTOSH AND COLOUR GRAPHICS BOARDS

Apple Computer (Cupertino, CA) has launched the 68030-based 40 MHz Macintosh IIfx, which uses distributed intelligence. Typical configurations include 80-160 Mb hard **disk drive** and a 1.4 Mb floppy **disk drive** and are priced between USD1r10-12k. The CPU board can be used as an **upgrade** to Macintosh IIs. **Apple Computer** has also launched three graphics boards offering colour and monochrome capabilities, and able to drive...

...mil colours. The boards costs USD1r700 and USD1r1k respectively, and the 4/8 can be **upgraded** to 8/24. The Monet board's display capabilities are comparable to the Picasso 8...
?

File 344:CHINESE PATENTS ABS APR 1985-2002/APR
(c) 2002 EUROPEAN PATENT OFFICE
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)
(c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200231
(c) 2002 Thomson Derwent

Set	Items	Description
S1	49767	DIS??? (3N) DRIVE?
S2	23910	S1 AND (TWO OR 2)
S3	18371	S1 AND (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	237531	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	844164	OCCUP? OR SITTING OR INSTALL?
S6	13028	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S7	62522	MODULAR? OR INTERCHANG?
S8	80954	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S9	2303	S1 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S10	24	(LISA? OR APPLE) (3N) COMPUTER?
S11	493175	IC=G11B?
S12	0	(S2 OR S3) AND S4 AND S5 AND S6
S13	0	S1 AND S4 AND S5 AND S6
S14	1	S1 AND S10
S15	121	S9 AND (S4 OR S5)
S16	72	S15 AND S11
S17	0	S16 AND LISA?
S18	0	S16 AND S6
S19	0	S16 AND S7
S20	7	S16 AND S8
S21	0	S9 AND S10
S22	4	S1 AND LISA?
S23	42	S2 AND S6
S24	42	S23 NOT (S14 OR S20 OR S22)
S25	39	S24 NOT AD=20000724:20020515
S26	1	S25 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S27	0	S25 AND S7

14/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

010353312 **Image available**
WPI Acc No: 1995-254626/199533
XRPX Acc No: N95-196582

Copy protection disk format controller - encodes clock pulses in case of
FM/MFM recording format of data pulses in case of GCR format according to
application-specific encoding rule

Patent Assignee: NEC CORP (NIDE)

Inventor: TATEISHI H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5432647	A	19950711	US 9368231	A	19930527	199533 B

Priority Applications (No Type Date): JP 92134573 A 19920527

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5432647	A		16	G11B-015/04	

...Abstract (Basic): copying mode of the host unit, the generally
established format is used to control the **disk drive** to write the
copy of the program and the copy of the decoding rule onto...

...USE/ADVANTAGE - For MS-DOS operating system and **Apple Computer**, Inc.
developed system. Prevents unauthorised duplication of original disk...

?

20/3,K/1 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

06840337 **Image available**

DISK CARTRIDGE

PUB. NO.: 2001-067832 [JP 2001067832 A]

PUBLISHED: March 16, 2001 (20010316)

INVENTOR(s): MEGURO HIROSHI

YAMAMOTO KAZUTOSHI

APPLICANT(s): SONY CORP

APPL. NO.: 11-248062 [JP 99248062]

FILED: September 01, 1999 (19990901)

DISK CARTRIDGE

INTL CLASS: G11B-023/03

ABSTRACT

PROBLEM TO BE SOLVED: To obtain a **cartridge** body which can be miniaturized and made **thin** by a method wherein the **cartridge** body which houses a discoidal recording medium at the inside is **installed**, an opening part, for recording and/or reproducing by which a part of the recording...

... to the outside over its inner circumference and its outer circumference is formed in the **cartridge** body, and a shutter member which can open and close the opening part is provided...

...coupling recessed part which is formed on a disk table on the side of a **disk drive** and which is coupled to a coupling protrusion part is formed in the central part 13 of a center hub 11. A **cartridge** body 6 is provided with an upper plate 21 and a lower plate 22. The **cartridge** body is provided with an intermediate frame 23 which is sandwiched between the plates. A shutter sliding region which is arranged and **installed** at the inner side of the upper plate 21 and the lower plate 22, and...

...The thickness of other regions excluding respective protrusion parts 27, 28 is formed to be **thin**. As a result, a flexible magnetic disk 5 can be turned and driven stably.

COPYRIGHT...

20/3,K/2 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

04708746 **Image available**

DISK CARTRIDGE , DISK DRIVE DEVICE AND DISK CHANGER

PUB. NO.: 07-029346 [JP 7029346 A]

PUBLISHED: January 31, 1995 (19950131)

INVENTOR(s): HANAKAWA EIICHI

KUROZUKA AKIRA

TAKEUCHI HIROYUKI

OKAZAWA HIRONORI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 05-174066 [JP 93174066]

FILED: July 14, 1993 (19930714)

DISK CARTRIDGE , DISK DRIVE DEVICE AND DISK CHANGER

INTL CLASS: G11B-023/03 ; G11B-017/04 ; G11B-017/08 ; G11B-019/02

ABSTRACT

PURPOSE: To obtain a disk **cartridge** suitable for miniaturization and **thin** formation, the **disk drive** device and the **disk** changer for using this disk **cartridge** .

...

...CONSTITUTION: The disk **cartridge** consists of an upper case 3, a lower case 2 and a middle case 4...

... disk 1 is drawn out more than half to be used. Consequently, since the disk **cartridge** is prevented from dropping in, and an optical pickup part is allowed to approach the disk, a dead space inside the drive device is minimized, and an **installation** space for a circuit part is secured, and then the miniaturization and **thin** formation of the drive device are feasible.

20/3,K/3 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

013137372 **Image available**

WPI Acc No: 2000-309244/200027

XRPX Acc No: N00-231762

Portable mini disk player has upper cabinet enclosing disk cartridge holder which is either depressed into or raised from the lower cabinet depending on necessity

Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000090536	A	20000331	JP 98251688	A	1998090	200027 B

Priority Applications (No Type Date): JP 98251688 A 19980907

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2000090536 A 13 G11B-017/04

Portable mini disk player has upper cabinet enclosing disk cartridge holder which is either depressed into or raised from the lower cabinet depending on necessity

Abstract (Basic):

... The upper cabinet (1) enclosing the inserting inlet port of **cartridge** holder is depressed into the open upper portion of the lower cabinet (2) enclosing the **disk drive** , by a spring, during recording-reproducing of disk. During insertion-removal of disk **cartridge** , the upper cabinet is raised from the open upper portion of the lower cabinet.

... Translation of upper cabinet into lower cabinet is maintained stably and a **thin** disk player is obtained...

...The figure shows the exterior perspective diagram depicting the insertion-removal condition and **installed** condition of **cartridge** into MD player...

...Title Terms: **CARTRIDGE** ;

International Patent Class (Main): G11B-017/04

International Patent Class (Additional): G11B-033/02

20/3,K/4 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

012055588 **Image available**

WPI Acc No: 1998-472499/199841

XRPX Acc No: N98-368802

Disc recording-and-reproducing apparatus - has magnetic adsorption unit provided between disc cartridge and tray, to make tray hold disc

cartridge

Patent Assignee: SONY CORP (SONY)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10199179	A	19980731	JP 973215	A	19970110	199841 B

Priority Applications (No Type Date): JP 973215 A 19970110

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 10199179	A	7	G11B-023/03	

... has magnetic adsorption unit provided between disc cartridge and tray, to make tray hold disc cartridge

...Abstract (Basic): which can be drawn in and out of the apparatus main body (2). A disc **cartridge** (10) that is to be loaded in the **disc drive** of the apparatus main body, is placed on the tray. A magnetic adsorption unit is provided between the disc **cartridge** and the tray

...The tray is made to hold the disc **cartridge** by the magnetic adsorption power. The magnetic adsorption unit includes a magnetic substance (20) provided in the disc **cartridge** side, and a magnet (21) provided in the tray side...

...ADVANTAGE - Prevents rocking of tray when moved since disc **cartridge** is held reliably by tray using magnetic adsorption power. **Cartridge** can be loaded reliably even when apparatus main body is **installed** vertically. Magnetic adsorption unit is not damaged due to incorrect usage, and does not interfere disc **cartridge** . Can be applied to **thin** disc **cartridge** .

...Title Terms: **CARTRIDGE** ;

International Patent Class (Main): **G11B-023/03**

20/3,K/5 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

012033862 **Image available**

WPI Acc No: 1998-450772/199839

XRPX Acc No: N98-351680

Magnetic recording system for floppy disk drive of computer - has magnetic heads that pinch floppy disk, each at contact load of 1 to 5 gf while floppy disk is turned

Patent Assignee: FUJI PHOTO FILM CO LTD (FUJIF)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10188201	A	19980721	JP 96345404	A	19961225	199839 B

Priority Applications (No Type Date): JP 96345404 A 19961225

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 10188201	A	10	G11B-005/012	

Magnetic recording system for floppy disk drive of computer...

...Abstract (Basic): The system uses a floppy disk (1) which has a **thin** ferromagnetic metal film formed on both sides of a flexible support body through a vacuum film-forming method. A pair of magnetic heads each provided with a slide block (4) **installed** at the end of a flat spring (2), pinches the floppy disk...

...The magnetic heads contact and slide along the **thin** ferromagnetic metal film to record or reproduce data. The contact load of each magnetic head...

...and improving recording density. Stabilises rotation of floppy disk
since floppy disk is accommodated in **cartridge** through liner...

International Patent Class (Main): **G11B-005/012**

International Patent Class (Additional): **G11B-005/66** ...

... **G11B-021/21**

20/3,K/6 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010879510 **Image available**

WPI Acc No: 1996-376461/199638

XRFX Acc No: N96-317060

**Thin -shaped disk cartridge for storing recording medium e.g. magneto
optical disk - has annular recess formed on half periphery of disk table
base opening in which disk table moves forward to centre**

Patent Assignee: SONY CORP (SONY)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 8180628	A	19960712	JP 94321046	A	19941222	199638 B

Priority Applications (No Type Date): JP 94321046 A 19941222

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 8180628	A	8	G11B-023/00	

**Thin -shaped disk cartridge for storing recording medium e.g. magneto
optical disk...**

...Abstract (Basic): The **cartridge** has a centre hole (4) of an optical
disk (2) provided to a main surface...

...disk table accepting unit. A hub (10) is formed with a magnetic board
and is **installed** on the centre hole of a disk substrate (3...

...disk table moves forward to the centre of a disk table base opening
(30). A **cartridge** main body (20) stores the optical disk rotatably. A
plate slidably **installed** in the **cartridge** main body, open and
closes opening for recording and reproducing. An annular recess (31) is
...

...ADVANTAGE - Ensures safe keeping of optical **disk** . Attains precise
rotation **drive** at **disk** table...

Title Terms: **THIN** ;

International Patent Class (Main): **G11B-023/00**

International Patent Class (Additional): **G11B-023/03**

20/3,K/7 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010655967 **Image available**

WPI Acc No: 1996-152920/199616

XRFX Acc No: N96-128454

**Disk cartridge e.g. for magneto-optic disk - has two bridge portions
with different thicknesses and interconnecting opposed side edges of
openings**

Patent Assignee: SONY CORP (SONY)

Inventor: FUNAWATARI T; OHMORI K

Number of Countries: 008 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 702371	A2	19960320	EP 95306495	A	19950914	199616 B
JP 8087851	A	19960402	JP 94221576	A	19940916	199623
SG 33493	A1	19961018	SG 951364	A	19950915	199649

EP 702371	A3	19971015	EP 95306495	A	19950914	199813
US 5850384	A	19981215	US 95527042	A	19950912	199906
CN 1144382	A	19970305	CN 95118604	A	19950916	200064

Priority Applications (No Type Date): JP 94221576 A 19940916

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 702371	A2	E	23	G11B-023/03	

Designated States (Regional): DE FR GB NL

JP 8087851	A	17	G11B-023/03
SG 33493	A1		G11B-017/03
EP 702371	A3		G11B-023/03
US 5850384	A		G11B-003/70
CN 1144382	A		G11B-023/03

Disk cartridge e.g. for magneto-optic disk...

...Abstract (Basic): The disk **cartridge** includes a disk which is rotatably provided between the upper and lower halves of **cartridge**. A signal recording surface faces a plane defined by each of the openings. A shutter is attached to the **cartridge** which slides to open and close both the openings. Each of two bridge portions has a **thin**-walled portion at the locations corresponding to the first and the second opening respectively so as to allow an easy approach of a head device **installed** in the **disk drive** to the signal recording surface of the disk...

...A thickness dimension of a **thin**-walled portion of one of the first and second bridge portions, measured in a lateral direction of the **cartridge**, is greater than a thickness dimension of the **thin**-walled portion of the other of the first and second bridge portions, measured in the lateral direction of the **cartridge**.

...

...chances of damage to bridge portion as result of shock forces generated by dropping of **cartridge** on hard surface

...Title Terms: **CARTRIDGE** ;

International Patent Class (Main): **G11B-003/70** ...

... **G11B-017/03** ...

... **G11B-023/03**

International Patent Class (Additional): **G11B-017/04**

22/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

011045619 **Image available**
WPI Acc No: 1997-023543/199703
XRPX Acc No: N97-019539

SHG laser appts. for optical disk drive and laser printer of computer
- has resonator of laser crystal with fluoride and optical part for
controlling radiation wavelength from crystal, reflected light from
optical part being detected as sample beam to stabilise beam

Patent Assignee: HITACHI METALS LTD (HITK)
Inventor: FURUKAWA Y; MAKIO S; MIYAI T; SATO M
Number of Countries: 005 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 748008	A2	19961211	EP 96304113	A	19960605	199703 B
JP 8334802	A	19961217	JP 95137608	A	19950605	199709
JP 9275236	A	19971021	JP 9682785	A	19960404	199801
EP 748008	A3	19971022	EP 96304113	A	19960605	199814
US 5825793	A	19981020	US 96656875	A	19960530	199849
EP 748008	B1	20010829	EP 96304113	A	19960605	200150
DE 69614766	E	20011004	DE 614766	A	19960605	200166
			EP 96304113	A	19960605	

Priority Applications (No Type Date): JP 9682785 A 19960404; JP 95137608 A 19950605

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 748008	A2	E	15	H01S-003/13	
Designated States (Regional): DE FR GB					
JP 8334802	A		9	G02F-001/37	
JP 9275236	A		9	H01S-003/109	
EP 748008	A3			H01S-003/13	
US 5825793	A			H01S-003/00	
EP 748008	B1	E		H01S-003/13	
Designated States (Regional): DE FR GB					
DE 69614766	E			H01S-003/13	Based on patent EP 748008

SHG laser appts. for optical disk drive and laser printer of computer
...

...Abstract (Basic): counter; also relates to field of optoelectronics.
Stabilises laser output without generating new loss in **LiSAF** laser
and wavelength conversion laser such as SHG using **LiSAF** laser. Number
of parts required for separating beam is reduced. Reliability of laser
obtaining stable...

22/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

007602865
WPI Acc No: 1988-236797/198834
XRPX Acc No: N88-179916

Magnetoresistive head of exchange-biasing antiferromagnetic material -
has central single-domain sense region outside which anti-ferromagnetic
alloy is exchange-coupled to magneto-resistive strip

Patent Assignee: SEAGATE TECHNOLOGY INT (SEAG-N); MAGNETIC PERIPHERALS INC
(MPER); MOWRY G S (MOWR-I)
Inventor: MOWRY G S
Number of Countries: 007 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 279537	A	19880824	EP 88300685	A	19880127	198834 B
AU 8811364	A	19880818				198840
JP 63205584	A	19880825	JP 87260743	A	19871015	198840

US 4891725	A	19900102	US 88221479	A	19880719	199009
US 4967298	A	19901030	US 89414941	A	19890929	199046
CA 1299284	C	19920421	CA 550209	A	19871026	199221
EP 279537	B1	19931229	EP 88300685	A	19880127	199401
DE 3886562	G	19940210	DE 3886562	A	19880127	199407
			EP 88300685	A	19880127	

Priority Applications (No Type Date): US 8715203 A 19870217; US 88152783 A 19880205; US 88152792 A 19880205; US 89414941 A 19890929

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 279537	A	E	15		
-----------	---	---	----	--	--

Designated States (Regional): DE FR GB

US 4891725	A		13		
------------	---	--	----	--	--

EP 279537	B1	E	15	G11B-005/39	
-----------	----	---	----	-------------	--

Designated States (Regional): DE FR GB

DE 3886562	G			G11B-005/39	Based on patent EP 279537
------------	---	--	--	-------------	---------------------------

CA 1299284	C			G11B-005/39	
------------	---	--	--	-------------	--

...Abstract (Basic): sputtering of this material on to a magnetoresistive strip and photoresist layer, followed by contact **metallisation** which is removed with the photoresist and its exchange coating by lift-off...

...USE/ADVANTAGE - E.g. for magnetic **disc drives**, edge and end domains are eliminated, stable central single-domain sense current region is provided...

...Abstract (Equivalent): shield with the sense strip located in the second gap. USE - E.g. for magnetic **disk drive**.
(...)

...stability of single domains in the central region. Exchange bias material (32,34) and contact **metallisation** are applied to these ends. This pattern of exchange material eliminates edge and end domains

22/3,K/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007200223

WPI Acc No: 1987-197232/198728

XRAM Acc No: C87-082787

XRPX Acc No: N87-147364

Article metallisation unit - has screening discs with openings through which pass spindle rotation axle

Patent Assignee: MOSC CITY CAR TRANS (MOCI-R)

Inventor: LUKASHEVIC I V; PEREGUDIN B P

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1271583	A	19861123	SU 3921081	A	19850626	198728 B

Priority Applications (No Type Date): SU 3921081 A 19850626

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

SU 1271583	A		3		
------------	---	--	---	--	--

Article metallisation unit...

...Abstract (Basic): The unit has a metalliser (1) and screening **discs** (2) with rotation **drive**, placed on carriage (5) which can displace in longitudinal and transverse directions w.r.t...

22/3,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007094748

WPI Acc No: 1987-094745/198714

XRAM Acc No: C87-039393

XRPX Acc No: N87-071153

Sintered ferrite magnetic for electric motor drives - is sealed with metal coating to prevent particle release

Patent Assignee: FAG KUGELFISCHER SCHAFFER (KUGE); SIEMENS AG (SIEI)

Inventor: DIERKES A; GILLY J; GRECHKSCH E; SCHELLENBE F

Number of Countries: 008 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3534852	A	19870402	DE 3534852	A	19850930	198714 B
EP 219688	A	19870429	EP 86112808	A	19860916	198717
US 4819104	A	19890404	US 86909218	A	19860918	198916
EP 219688	B	19901227				199101
DE 3676625	G	19910207				199107

Priority Applications (No Type Date): DE 3534852 A 19850930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

DE 3534852	A		2		
------------	---	--	---	--	--

EP 219688	A	G			
-----------	---	---	--	--	--

Designated States (Regional): AT CH DE FR IT LI NL

US 4819104	A		3		
------------	---	--	---	--	--

EP 219688	B				
-----------	---	--	--	--	--

Designated States (Regional): AT CH DE FR IT LI NL

...Abstract (Equivalent): An electromotive **drive** for a **disc** memory with an external-rotor motor permanently magnetically excited by partially shell-shaped sintered-ferrite...

...Abstract (Equivalent): Compact **disk** pack **drive** has a hub (2), holding memory disks (7-12), secured on the external rotor shaft...

...form of partial shells used as excitation magnets. The ferrite magnets are sealed by surface **metallisation**, which can also be formed by application of a reactive Ni cpd..

25/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

06857245 **Image available**
OPTICAL DISK DEVICE

PUB. NO.: 2001-084747 [JP 2001084747 A]
PUBLISHED: March 30, 2001 (20010330)
INVENTOR(s): SATO ATSUTOSHI
URUSHIBARA ATSUHIKO
OKI MASAYUKI
SUSO HIROSHI
SATO MASAHIKO
APPLICANT(s): HITACHI LTD
APPL. NO.: 11-257783 [JP 99257783]
FILED: September 10, 1999 (19990910)

ABSTRACT

... TO BE SOLVED: To facilitate work for assembling and disassembling a case, and at the **same** time to reduce **space**, when using a screw.

SOLUTION: A case where a **disk driver** or the like is accommodated inside is composed of an upper case 1, lower case 2, front case 3, rear case, and side piece 4 that is provided on both sides of the case and projects from the side of the lower case 2. In the side piece 4, a engagement piece is provided on the inner surface, and the engagement piece is gear-locked to the upper and lower cases 1 and 2, thus connecting the upper case 1 to the lower case 2 via the side piece 4. The side piece 4 is arranged slantingly at the side...

... for height dimensions H of the case, thus enlarging the width of the lower case 2 for providing a radiation hole 7 and a leg part 8 on the bottom surface of the lower case 2. The side piece 4 is also used as the leg part, when the case is...

25/3,K/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

06785128 **Image available**
SEAL FOR FIXING PLANE

PUB. NO.: 2001-012608 [JP 2001012608 A]
PUBLISHED: January 16, 2001 (20010116)
INVENTOR(s): AZUMA YOSHIO
NISHIMURA HIROSHI
NISHIMURA YASUYUKI
APPLICANT(s): MITSUBISHI CABLE IND LTD
APPL. NO.: 11-189568 [JP 99189568]
FILED: July 02, 1999 (19990702)

ABSTRACT

...seal suitable for a case.

SOLUTION: A seal used for a case of a hard **disk drive** is incorporated between a case cover 5 and case main body 6. The seal main body 1 with a low hardness is covered by the coating layer 2 with a high hardness. The coating layer 2 is formed by that the coating agent such as a rubber and resin is applied...

...a minute projection part 4 and a case cover 5 is locally big in the **space** therebetween. The **same** press-contact surface pressure F is exerted between the minute projection part 4 and case...

25/3,K/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

06506039 **Image available**
ELECTRONIC APPARATUS, PART UNIT, AND ATTACHMENT

PUB. NO.: 2000-091756 [JP 2000091756 A]
PUBLISHED: March 31, 2000 (20000331)
INVENTOR(s): KASAHARA MASA HARU
 INOUE KOICHI
 MURAKAMI TAKESHI
APPLICANT(s): FUJITSU LTD
APPL. NO.: 10-259824 [JP 98259824]
FILED: September 14, 1998 (19980914)

ABSTRACT

... provide an electronic apparatus which provides a long-time driving by mounting batteries of the **same** shape in **two slots** of different width.

SOLUTION: A portable electronic apparatus comprises a main body 4, a first ...

... in the main body having a first width and allows the insertion of a floppy **disk drive** 20 and a super **disc drive** 23 of substantially same width with the first battery 18. The portable electronic apparatus further...

...first width and allows the insertion of a CD-ROM drive 28 and a hard **disc drive** 30 which are wider than a first storage medium drive and a second battery 24...

25/3,K/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

05152149 **Image available**
DISK DRIVE DEVICE

PUB. NO.: 08-107649 [JP 8107649 A]
PUBLISHED: April 23, 1996 (19960423)
INVENTOR(s): ISHIZUKA YUTAKA
 OTA SHINJI
APPLICANT(s): SANKYO SEIKI MFG CO LTD [000223] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-202088 [JP 95202088]
FILED: August 08, 1995 (19950808)

DISK DRIVE DEVICE
...JAPIO CLASS: Generation); 29. 2 (PRECISION INSTRUMENTS...
...Equipment); 45. 2 (INFORMATION PROCESSING...

ABSTRACT

PURPOSE: To obtain a **disk drive** device which can be easily manufactured and has a sufficient performance for shielding dust at...

...CONSTITUTION: A **disk drive** device is provided with a hub 1 where a **disk** is mounted, a **drive magnet** 2 rotating in one piece with the hub, a stator which is laid out opposite to the drive magnet 2, a shaft 4, and a bearing 5 which is engaged with the shaft 4 and...

... The hub 1 is rotated and driven by the relative rotation between the drive magnet 2 and the stator. A shield ring 6 consisting of a baked material where metal powder...

...side of the shaft 4, opposes the outer ring of a bearing 5 with a **space**, and at the **same** time the outer-periphery surface of the shield ring 6 and the inner-periphery surface...

25/3,K/5 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

03217860 **Image available**
SCSI DISK SUB SYSTEM

PUB. NO.: 02-193360 [JP 2193360 A]
PUBLISHED: July 31, 1990 (19900731)
INVENTOR(s): FUKUDA TAKASHI
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 01-012634 [JP 8912634]
FILED: January 20, 1989 (19890120)
JOURNAL: Section: P, Section No. 1119, Vol. 14, No. 482, Pg. 35,
October 19, 1990 (19901019)

ABSTRACT

... To relieve a readout error by writing same content in one and same position of **two** sets of SCSI **disk drives** at data write so as to provide redundancy at data readout...

...SCSI command received via an SCSI bus 6 and writes the same data to the **same location** of SCSI **disk drives** 1, 2 through I/F control sections 31, 32 when the command is the write system command...

... the case of the command of a readout, the command is executed to the SCSI **disk drive** 1 via an I/F control section 31. In this case, when no error takes...

... is transferred. If any readout error takes place, the command is executed by the SCSI **disk drive** 2 via the I/F control section 32 to relieve the readout error.

25/3,K/6 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

02324201 **Image available**
TEST METHOD FOR DEMAGNETIZATION FOR MAGNETIC **DISK DRIVER**

PUB. NO.: 62-241101 [JP 62241101 A]
PUBLISHED: October 21, 1987 (19871021)
INVENTOR(s): YUASA MASAHIRO
ITO TADASHI
APPLICANT(s): OKI ELECTRIC IND CO LTD [000029] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 61-084046 [JP 8684046]
FILED: April 14, 1986 (19860414)
JOURNAL: Section: P, Section No. 687, Vol. 12, No. 112, Pg. 101, April 09, 1988 (19880409)

TEST METHOD FOR DEMAGNETIZATION FOR MAGNETIC **DISK DRIVER**

ABSTRACT

...CONSTITUTION: A floppy disk test device **2** is controlled by a tester 1 and a data is written on one circumference of...

... test with high reliability is conducted in a shorter test period than that accessing the **same location** of the specific track.

25/3,K/7 (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

01572239 **Image available**
CASSETTE LOADING DEVICE

PUB. NO.: 60-050739 [JP 60050739 A]
PUBLISHED: March 20, 1985 (19850320)
INVENTOR(s): ASAMI KATSUO
APPLICANT(s): NEC HOME ELECTRONICS LTD [000193] (A Japanese Company or
 Corporation), JP (Japan)
APPL. NO.: 58-159727 [JP 83159727]
FILED: August 31, 1983 (19830831)
JOURNAL: Section: P, Section No. 375, Vol. 09, No. 177, Pg. 72, July
 23, 1985 (19850723)

ABSTRACT

PURPOSE: To save the **space** and at the **same** time to eliminate the need
for wiring on a switch in order to simplify the...

...CONSTITUTION: An up-end switch SW(sub 1), an insertion switch SW(sub 2
) and a down-end switch SW(sub 3) are provided on the surface opposite to
...
... a cassette A is loaded together with a cassette holder 20, the switch
SW(sub 2) is turned on by a projection 42B of the gear 38. Then a motor
26...

...20 moves along the group 24 and the cassette A is loaded to a reel
drive disk , the switch SW(sub 3) is actuated by a projection 42C. Then
the drive of...

25/3,K/8 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

013632703 **Image available**
WPI Acc No: 2001-116911/200113
XRPX Acc No: N01-086372

Disk drive for personal computer, has cover provided such that disk
is inserted or removed in disk tray which is in installation position in
lid-opened condition

Patent Assignee: TEAC CORP (TEAC)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000339942	A	20001208	JP 99152979	A	19990531	200113 B

Priority Applications (No Type Date): JP 99152979 A 19990531

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 2000339942 A 12 G11B-033/02

Disk drive for personal computer, has cover provided such that disk
is inserted or removed in disk...

Abstract (Basic):

... Disk is installed in disk tray (12) provided to main portion
(11A) of **disk drive** (10A). An opening and closing lid is provided
in the main portion of the **disk drive** . A cover (14) is provided so
that the disk is inserted or removed in disk...

... **Disk drive** such as magnetic **disk drive** , optical **disk
drive** , etc., for use with desk top and laptop personal computers as
external storage, for use...

...As disk installation and ejection operations are done using lid, **two**
different disks suitable for desk top and laptop computers can be used
with **same disk drives** . Additional **space** is not required for
pulling out disk tray...

...The figure shows the diagram of **disk drive** .

...

. ... Disk drive (10A)

25/3,K/9 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

013206627 **Image available**
WPI Acc No: 2000-378501/200033
XRPX Acc No: N00-284274

Electronic safeguard for mechanical combination lock, comprises motor-driven blocking disc rotated between blocked and unblocked states by coded electronic identification unit.

Patent Assignee: DENY SA (DENY-N)
Inventor: BARGE E; BERTAUX G; MIKA F
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2785322	A1	20000505	FR 9813725	A	19981102	200033 B

Priority Applications (No Type Date): FR 9813725 A 19981102

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
FR 2785322	A1	10	E05B-017/14	

Electronic safeguard for mechanical combination lock, comprises motor-driven blocking disc rotated between blocked and unblocked states by coded electronic identification unit.

Abstract (Basic):

... comprises a circular stamping (14), a guide washer (15) and a blocking disc (10), the **two** former being pinned, through holes provided (16,17), to the lock body and/or the gate. The blocking disc has a slot (11) admitting the key and corresponding to an **identical slot** (19) in the fixed stamping. An excrescence (12) on the disc rides in a semi...

...The drawing shows the 3 component **discs** and the **drive** motor...

...pp; 10 DwgNo 2 / 2

25/3,K/10 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

013057473 **Image available**
WPI Acc No: 2000-229341/200020
XRPX Acc No: N00-172549

Defective management procedure in optical disc drive , involves setting sum total recording capacity of recording surfaces to satisfy preset relation

Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000048491	A	20000218	JP 98209506	A	1998072	200020 B

Priority Applications (No Type Date): JP 98209506 A 19980724

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2000048491	A	15	G11B-020/12	

Defective management procedure in optical disc drive , involves setting sum total recording capacity of recording surfaces to satisfy preset relation

...Abstract (Basic): NOVELTY - The defective management procedure involves dividing recording surfaces into N groups, where N= 2 or more integer. The recording surfaces have user area where user's data is recorded...

...USE - For detecting defective area in optical **disc drive** .
...

...ADVANTAGE - Allocation of recording capacity of disk surface can be done to user area and **space** area effectively. As **same** disk can be used to record both AV and PC files, security of data, recording...

...file is avoided. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of optical **disc drive** .

25/3,K/11 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

013049346 **Image available**
WPI Acc No: 2000-221200/200019
XRPX Acc No: N00-165466

Shortcut error recovery procedure for reading from or writing to hard disk drive

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RD 428139	A	19991210	RD 99428139	A	19991120	200019 B

Priority Applications (No Type Date): RD 99428139 A 19991120

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
RD 428139	A		2 G11B-000/00	

Shortcut error recovery procedure for reading from or writing to hard disk drive

Abstract (Basic):

... error, which step recovered the error. The next time the same error occurs at the **same location** , the shortcut error recovery procedure attempts the error recovery step first which was stored at...
... For recovering hard **disk drives** (HDD) from errors such as thermal asperity, off-tracked data errors etc...

...pp; 2 DwgNo 1/1

25/3,K/12 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

012020058 **Image available**
WPI Acc No: 1998-436968/199837
XRPX Acc No: N98-340508

Computer with high capacity optical disc drive e.g. for CD- ROM - has controller that deletes data from first cache, when read data is non-executable data

Patent Assignee: ROADRUNNER TECHNOLOGY INC (ROAD-N)
Inventor: STEPHENS M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5787461	A	19980728	US 96695405	A	19960812	199837 B

Priority Applications (No Type Date): US 96695405 A 19960812

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 5787461 A 10 G06F-013/00

Computer with high capacity optical disc drive e.g. for CD- ROM...

...Abstract (Basic): that indicates the location of first data in the optical disc and also indicates storage **location** of the **same** data in the first memory...

...Dwg. 2 /4

25/3,K/13 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

011792020 **Image available**
WPI Acc No: 1998-208930/199819
XRPX Acc No: N98-166057

Hard disc drive mounting arrangement for desk-top computer - has tray with flexible cross member for mounting either or two differently-sized drive units

Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: ASTIER C; BONFORT Y; BRUNEL A
Number of Countries: 005 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 834879	A1	19980408	EP 96410103	A	19961003	199819 B
JP 10178280	A	19980630	JP 97286011	A	19971002	199836
US 5921644	A	19990713	US 97933237	A	19970918	199934
EP 834879	B1	20020220	EP 96410103	A	19961003	200214
DE 69619374	E	20020328	DE 619374	A	19961003	200229
			EP 96410103	A	19961003	

Priority Applications (No Type Date): EP 96410103 A 19961003

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
EP 834879 A1 E 12 G11B-033/00
Designated States (Regional): DE FR GB
JP 10178280 A 8 H05K-005/02
US 5921644 A A47B-081/00
EP 834879 B1 E G11B-033/00
Designated States (Regional): DE FR GB
DE 69619374 E G11B-033/00 Based on patent EP 834879

Hard disc drive mounting arrangement for desk-top computer...

...has tray with flexible cross member for mounting either or two differently-sized drive units

...Abstract (Basic): The mounting tray includes **two** stepped side members (12,13) provided with studs (21,22) for engaging side fixing holes...

...ADVANTAGE - Enables mounting of 5 1/4 inch or 3 1/ 2 inch units in **same space** without need for different mounting pieces...

...Title Terms: **TWO** ;

25/3,K/14 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

011511147 **Image available**
WPI Acc No: 1997-489061/199745
XRPX Acc No: N97-407458

Laser interferometry for flying height tester in disk drive design - has two laser sources of different frequency monochromatic light, with beams combined and steered to gap between slider and disk, where

reflection is detected by photodiode which reads analogue intensity

Patent Assignee: PHASE METRICS INC (PHAS-N)

Inventor: ERICKSON T L; LAUER J P

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5673110	A	19970930	US 939281	A	19930126	199745 B
			US 96634670	A	19960417	

Priority Applications (No Type Date): US 939281 A 19930126; US 96634670 A 19960417

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5673110 A 10 G01B-009/02 Cont of application US 939281

Laser interferometry for flying height tester in disk drive design...

...has two laser sources of different frequency monochromatic light, with beams combined and steered to gap between...

...Abstract (Basic): The interferometer includes two laser sources of different frequency monochromatic light that are time multiplexed through a beam combiner...

...analogue intensity are taken at respective time-points to sample each laser source, and the two measured intensities are compared to determine the slider to disk spacing...

...Since different frequency light will have different minima and maxima points for the same spacing, integer ambiguities can be directly resolved. Alternatively, several photodiodes can be included with a multi...

...Dwg. 2 /3

...Title Terms: TWO ;

25/3,K/15 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

011255277 **Image available**

WPI Acc No: 1997-233180/199721

XRPX Acc No: N97-192771

Drive apparatus of personal computer - provides 3.5 magneto-optical disk drive and CD-ROM disk drive in single body, wherein space for drive motor is formed at side of MO disk drive

Patent Assignee: FUJITSU GENERAL LTD (GENH)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9073764	A	19970318	JP 95231323	A	19950908	199721 B

Priority Applications (No Type Date): JP 95231323 A 19950908

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 9073764 A 3 G11B-033/02

... provides 3.5 magneto-optical disk drive and CD-ROM disk drive in single body, wherein space for drive motor is formed at side of MO disk drive

...Abstract (Basic): The apparatus has a body (1) which includes a 3.5-inch magneto-optical disk drive (3) and a CD-ROM disk drive (2). The CD-ROM disk drive includes a reciprocating tray (2a...

...A space (a) is provided at the side of the magneto-optical disk drive . A substrate (4) mounted with a drive motor (5) is accommodated in the space...

...ADVANTAGE - Improves versatility of information apparatus since CD-ROM disk and MO disk drives are provided in same body. Reduces space allotted for drive motors of both drives...

25/3,K/16 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010812839 **Image available**

WPI Acc No: 1996-309792/199631

XRPX Acc No: N96-260245

Multilayer record carrier for single scanning head drive - includes at least two parallel information layers for scanning by single head and each with control block positioned so that they may be sequentially read with minimum displacement of scanning head

Patent Assignee: PHILIPS ELECTRONICS NV (PHIG); PHILIPS NORDEN AB (PHIG); US PHILIPS CORP (PHIG)

Inventor: BODT H; MONS J J

Number of Countries: 020 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9619807	A2	19960627	WO 95IB1099	A	19951206	199631 B
WO 9619807	A3	19960829	WO 95IB1099	A	19951206	199643
EP 745255	A1	19961204	EP 95938001	A	19951206	199702
			WO 95IB1099	A	19951206	
JP 9509776	W	19970930	WO 95IB1099	A	19951206	199749
			JP 96519640	A	19951206	
KR 97701413	A	19970317	WO 95IB1099	A	19951206	199813
			KR 96704517	A	19960819	
CN 1144011	A	19970226	CN 95192103	A	19951206	200062
US 6370102	B1	20020409	US 95573850	A	19951218	200227

Priority Applications (No Type Date): EP 95202491 A 19950914; EP 94203677 A 19941219

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9619807 A2 E 14 G11B-027/28

Designated States (National): CN JP KR

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL

PT SE

WO 9619807 A3 G11B-027/28

EP 745255 A1 E 14 G11B-027/28 Based on patent WO 9619807

Designated States (Regional): AT DE FR GB

JP 9509776 W 16 G11B-020/12 Based on patent WO 9619807

KR 97701413 A G11B-007/24 Based on patent WO 9619807

CN 1144011 A G11B-027/28

US 6370102 B1 G11B-007/00

... includes at least two parallel information layers for scanning by single head and each with control block positioned so...

...Abstract (Basic): suitable to be scanned by means of a single scanning head, and has at least two substantially parallel information layers. Each layer comprises a block of control information with information for scanning the layer. The blocks generally have the same physical location in the plane of the different layers...

...USE/ADVANTAGE - For optical disk drive . Provides each information layer with individual control information. For larger number of information layers, area...

...Title Terms: TWO ;

25/3,K/17 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010683422 **Image available**
WPI Acc No: 1996-180378/199619
XRPX Acc No: N96-151591

Analogue time display device - has time display disc provided with drive element cooperating with operating element for design disc providing decorative optical effect

Patent Assignee: TAIYO MUSIKINSTRUMENTE GMBH (TAIY-N)

Inventor: TOTSUKA R

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4433817	C1	19960411	DE 4433817	A	19940922	199619 B
JP 8179056	A	19960712	JP 95244574	A	19950922	199638
CH 688014	A3	19970430	CH 952576	A	19950912	199723
CH 688014	B5	19971031	CH 952576	A	19950912	199748
US 5694378	A	19971202	US 95529496	A	19950918	199803

Priority Applications (No Type Date): DE 4433817 A 19940922

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 4433817	C1		6	G04B-019/04	
JP 8179056	A		5	G04B-045/00	
US 5694378	A		6	G04B-019/06	
CH 688014	A3			G04B-019/04	
CH 688014	B5			G04B-019/04	

... has time display disc provided with drive element cooperating with operating element for design disc providing decorative optical effect

...Abstract (Basic): The time display device has at least 2 partially transparent discs (A) spaced apart along the same axis, each rotated with a respective period duration and carrying a marking acting as a...

...a further rotary disc (D) provided with a graphical design, with the adjacent time display disc carrying a drive element (X1) cooperating with an operating element (X2) for the further rotary disc. Pref. the drive element and the operating element are each provided as a cylinder projecting from the disc...

...Abstract (Equivalent): The time display device has at least 2 partially transparent discs (A) spaced apart along the same axis, each rotated with a respective period duration and carrying a marking acting as a...

...a further rotary disc (D) provided with a graphical design, with the adjacent time display disc carrying a drive element (X1) cooperating with an operating element (X2) for the further rotary disc. Pref. the drive element and the operating element are each provided as a cylinder projecting from the disc...

25/3,K/18 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

010620278 **Image available**
WPI Acc No: 1996-117231/199612
XRPX Acc No: N96-097970

Condition diagnosis system esp. for broadcasting VTR equipment - stores information concerning interrupted diagnosis and indicates existence of interrupted process during subsequent maintenance process

Patent Assignee: SONY CORP (SONY)

Inventor: MUKAI M; OHKUWA K

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9603744	A1	19960208	WO 95JP1499	A	19950727	199612 B
JP 8505656	X	19961126	WO 95JP1499	A	19950727	199708

			JP 96505656	A	19950727	
CN 1136358	A	19961120	CN 95190951	A	19950727	199804
US 5778006	A	19980707	WO 95JP1499	A	19950727	199834
			US 96624437	A	19961021	

Priority Applications (No Type Date): JP 94175660 A 19940727

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 9603744	A1	J	157	G11B-015/00	
------------	----	---	-----	-------------	--

Designated States (National): CN JP US

JP 8505656	X		G11B-015/00	Based on patent WO 9603744
------------	---	--	-------------	----------------------------

US 5778006	A		G01R-031/28	Based on patent WO 9603744
------------	---	--	-------------	----------------------------

CN 1136358	A		G11B-015/00	
------------	---	--	-------------	--

...Abstract (Basic): The controller provides MFM signals as normal and these are passed (40) directly to the **drive** for normal **discs** .

...

...46). Here the MFM signal is converted to a high density format. This uses the **same space** as a conventional bit to store a pulse of one of 32 timings on the...

...Dwg. 2 /26

25/3,K/19 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010135524 **Image available**

WPI Acc No: 1995-036775/199505

Related WPI Acc No: 1994-056155; 1994-225013

XRPX Acc No: N95-028940

Ultra-slim disc storage unit for computer system - has interconnect along side of frame providing electrical connection to disc storage unit

Patent Assignee: MAXTOR CORP (MAXT-N)

Inventor: DIEL M A; SEAYER J R; TITCOMB F; SEAYER J A

Number of Countries: 053 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9429866	A1	19941222	WO 94US6586	A	19940608	199505	B
AU 9471054	A	19950103	AU 9471054	A	19940608	199522	
US 5488523	A	19960130	US 92881739	A	19920506	199611	
			US 9374215	A	19930609		
BR 9406797	A	19960305	BR 946797	A	19940608	199615	
			WO 94US6586	A	19940608		
EP 702831	A1	19960327	EP 94920159	A	19940608	199617	
			WO 94US6586	A	19940608		
JP 9501532	W	19970210	WO 94US6586	A	19940608	199716	
			JP 95502134	A	19940608		
CN 1129490	A	19960821	CN 94192381	A	19940608	199751	
US 5822152	A	19981013	US 92881739	A	19920506	199848	
			US 9374215	A	19930609		
			US 95564908	A	19951129		
			US 96751354	A	19961118		

Priority Applications (No Type Date): US 9374215 A 19930609; US 92881739 A 19920506; US 95564908 A 19951129; US 96751354 A 19961118

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

WO 9429866	A1	E	30	G11B-025/04	
------------	----	---	----	-------------	--

Designated States (National): AT AU BB BG BR BY CA CH CN CZ DE DK ES FI

GB GE HU JP KG KP KR KZ LK LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE

SI SK TJ TT UA UZ VN

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL

OA PT SE

AU 9471054	A		G11B-025/04	Based on patent WO 9429866
------------	---	--	-------------	----------------------------

US 5488523	A	13	G11B-017/02	CIP of application US 92881739
------------	---	----	-------------	--------------------------------

BR 9406797 A G11B-025/04 CIP of patent US 5328271
 EP 702831 A1 E 30 G11B-025/04 Based on patent WO 9429866
 Designated States (Regional): DE FR GB IT
 JP 9501532 W 33 G11B-025/04 Based on patent WO 9429866
 US 5822152 A G11B-017/02 CIP of application US 92881739
 Div ex application US 9374215
 Cont of application US 95564908
 CIP of patent US 5328271
 Div ex patent US 5488523
 CN 1129490 A G11B-025/04

...Abstract (Basic): The disc storage unit includes a frame with **two** enclosed **spaces** in the **same** plane and adjacent to each other. A **disc drive** assembly provides readable and writable information stored on a disc medium contained within the first...

...Abstract (Equivalent): **disc drive** assembly providing readable and writable information storage on a **disc** medium, said **disc drive** assembly comprising a hub and a hydrodynamic bearing disposed within said first enclosed space, said...

...between each of said balls and said cylindrical section of each of said sockets, said **disc drive** assembly being contained within said first enclosed space...

...an electronic circuit board for controlling the operation of said **disc drive** assembly, said electronic circuit board being housed on a board contained within said second enclosed

25/3,K/20 (Item 13 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
 (c) 2002 Thomson Derwent. All rts. reserv.

009756960 **Image available**
 WPI Acc No: 1994-036811/199405
 XRPX Acc No: N94-028650

Multiphase hybrid stepper motor - has magnetic poles with teeth spaced to correspond with rotor tooth pitch and number of teeth of non-symmetrical stators is formulated

Patent Assignee: MINEBEA KK (MINW)
 Inventor: YOSHIDA K; YOSHIMURA N
 Number of Countries: 007 Number of Patents: 006
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 581612	A1	19940202	EP 93306065	A	19930730	199405 B
JP 6062557	A	19940304	JP 92224844	A	19920731	199414
US 5374865	A	19941220	US 9399539	A	19930730	199505
EP 581612	B1	19970312	EP 93306065	A	19930730	199715
DE 69308676	E	19970417	DE 608676	A	19930730	199721
			EP 93306065	A	19930730	
JP 3278770	B	20020430	JP 92224844	A	19920731	200230

Priority Applications (No Type Date): JP 92224844 A 19920731

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 581612	A1	E	28	H02K-037/18	
Designated States (Regional): DE FR GB IT NL					
JP 6062557	A			H02K-037/04	
US 5374865	A		26	H02K-037/00	
EP 581612	B1	E	27	H02K-037/18	
Designated States (Regional): DE FR GB IT NL					
DE 69308676	E			H02K-037/18	Based on patent EP 581612
JP 3278770	B		15	H02K-037/04	Previous Publ. patent JP 6062557

...Abstract (Basic): USE/ADVANTAGE - For e.g printers, plotters, facsimiles, and **disc - drives** . Minimises fluctuation of torque, improves torque stiffness and reduces resonance vibration during motor

rotation...

...Abstract (Equivalent): radially inwardly directed statorpoles, each of the statorpoles having one untapped winding; the statorpoles having **two** or more teeth spaced with the tooth pitch T_p , a total number of stator teeth...

...NS = $K(S_0 - S_1) + 10(S_1 - 1 + B)$, where K is any integer varying from 2 to 5, S_0 and S_1 are integers as small as possible in such a way...

...Abstract (Equivalent): The motor magnetic poles have **two** or more teeth placed with the **same spaces** as with toothpitch of the rotor. The total number (NS) of the teeth of the...

...NR-NS= $K(S_0 - S_1) + 10(S_1 - 1 + B)$, where K is an integer between 2 and 5, S_0 and S_1 are integers as small as possible in such a way...

25/3,K/21 (Item 14 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

009520719 **Image available**

WPI Acc No: 1993-214261/199326

XRFX Acc No: N93-164635

Cylinder recognition system for IC engine - uses combination pulse signal obtained by scanning crankshaft disc and camshaft disc via respective transmitters

Patent Assignee: BOSCH GMBH ROBERT (BOSC)

Inventor: DENZ H; FLAETGEN D; OTT K

Number of Countries: 020 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9312333	A1	19930624	WO 92DE964	A	19921119	199326	B
DE 4141713	A1	19930624	DE 4141713	A	19911218	199326	
EP 572584	A1	19931208	EP 92923319	A	19921119	199349	
			WO 92DE964	A	19921119		
JP 6505544	W	19940623	WO 92DE964	A	19921119	199429	
			JP 93510498	A	19921119		
US 5460134	A	19951024	WO 92DE964	A	19921119	199548	
			US 9387687	A	19931115		
EP 572584	B1	19960925	EP 92923319	A	19921119	199643	
			WO 92DE964	A	19921119		
DE 59207257	G	19961031	DE 507257	A	19921119	199649	
			EP 92923319	A	19921119		
			WO 92DE964	A	19921119		
RU 2104404	C1	19980210	WO 92DE964	A	19921119	199839	
			RU 9352709	A	19921119		
KR 238735	B1	20000115	WO 92DE964	A	19921119	200116	
			KR 93702449	A	19930817		

Priority Applications (No Type Date): DE 4141713 A 19911218

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9312333 A1 G 26 F02D-041/36

Designated States (National): JP KR RU UA US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE

DE 4141713 A1 10 F02B-041/06

EP 572584 A1 G 26 F02D-041/36 Based on patent WO 9312333

Designated States (Regional): DE FR GB IT SE

JP 6505544 W F02D-045/00 Based on patent WO 9312333

US 5460134 A 10 F02M-051/00 Based on patent WO 9312333

EP 572584 B1 G 11 F02D-041/36 Based on patent WO 9312333

Designated States (Regional): DE FR GB IT SE

DE 59207257 G F02D-041/36 Based on patent EP 572584

Based on patent WO 9312333

RU 2104404 C1 F02D-041/36

KR 238735 B1 F02D-041/36

...Abstract (Equivalent): arrangement of an internal combustion engine having cylinder identification having n cylinders, having a transmitter **disc** (10) which is **driven** by the crankshaft (11) and has a multiplicity of angle marks (12) and at least...

...distinguishable reference mark (13) which is allocated to a fixed crankshaft angle, and a transmitter **disc** (14) which is **driven** by the crankshaft (15) which rotates half as quickly having segments (16,17) having **two** different lengths and **two** interspaces (18,19) of different length between **two** segments (16,17) each and **two** stationary pick-ups (20,21) which are allocated to the transmitter discs and transmit as...

...control unit (22), the arrangement of the segments (16,17) being performed on the transmitter **disc** (14) **driven** by the camshaft (15) such that the output signal of the pick-up (21) contains...

...phase are the same, in that the number of segments (16,17) of the transmitter **disc** (14) **driven** by the camshaft (15) corresponds to the cylinder no. n, and in that the position of the reference mark (13) on the transmitter **disc** (10) **driven** by the crankshaft (11) is selected such that the signal caused by it occurs with...

...Abstract (Equivalent): cylinder identification in an internal combustion engine having n cylinders, the arrangement comprising a transmitter **disc driveable** by a crankshaft of the internal combustion engine and having a plurality of angle marks and at least one distinguishable reference mark allocated to a fixed crankshaft angle; a transmitter **disc driveable** by a camshaft of the internal combustion engine and rotating half as quickly, said transmitter disc having a number of segments corresponding to the cylinder number n, said segments having **two** different lengths and **two** interspaces of different lengths between **two** segments each; **two** stationary pick-ups allocated to said transmitter discs and transmitting as a function of said...

...that during a second crankshaft revolution, said angle marks being arranged also so that all **spacings** between **same** edges of one phase are the same, a number of angle marks corresponds to the...

25/3,K/22 (Item 15 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

009353828 **Image available**

WPI Acc No: 1993-047307/199306

XRPX Acc No: N93-036237

Medical sample examination module for insertion into DC disc drive slot - has LEDs located within rotatable drum of opaque material allowing selection of light filters each formed to pass light of specific wavelength

Patent Assignee: EURO BIOSYSTEMS LTD (EUBI-N)

Inventor: YEUDALL D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2258528	A	19930210	GB 9113083	A	19910618	199306 B

Priority Applications (No Type Date): GB 9113083 A 19910618

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
GB 2258528	A	18	G01N-033/49	

Medical sample examination module for insertion into DC disc drive slot...

...Abstract (Basic): microplate through the casing and at least one row of light-emitting devices with the **same spacing** as the wells of each row in a microplate located within a rotatable drum (9...

...are arranged above the microplate support arrangement, the spacing of the photoelectric cells being the **same** as the **spacing** of the wells of each row of a microplate and each cell being in line...

...The rotatable drum has three apertures **two** of which are covered in filters. The drum is rotated to bring each aperture between...

...ADVANTAGE - Allows analysis of samples at **two** separate...

25/3,K/23 (Item 16 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

008531365 **Image available**
WPI Acc No: 1991-035449/199105
XRPX Acc No: N91-027457

Light-beam attenuator - has slotted discs, one rotated, other with windage vanes drawn behind by springs, and alignment between slots set by drive speed

Patent Assignee: MOSCOW LIKHACHEV CAR WKS (MOLI)
Inventor: ELIZAROV K N; SHELEMIN B B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1569767	A	19900607	SU 4404962	A	19880113	199105 B

Priority Applications (No Type Date): SU 4404962 A 19880113

...Abstract (Basic): Discs (1, 2) have **identical** systems of radial **slots** . Disc (1) is coupled to **drive** (3), while **disc** (2) has vanes (7,8) to provide windage resistance. The discs are coupled by springs (5). A control signal rotates disc (1), which draws disc (2) along with it. The springs are extended by the windage resistance, changing the alignment between...

25/3,K/24 (Item 17 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

008396067 **Image available**
WPI Acc No: 1990-283068/199038
XRPX Acc No: N90-218260

Edge polisher for spectacle lenses - uses magnets coaxial with form-normal drive to set polishing limits of facet

Patent Assignee: VEB RATHENOWER OPTISCHE WERKE (VBRO); ASKANIA-WERKE
RATHENOW GMBH & CO KG (ASKA-N)
Inventor: EBERT D; WEGENER G

Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DD 277636	A	19900411	DD 322679	A	19881206	199038 B
DD 277636	B5	19930617	DD 322679	A	19881206	199332

Priority Applications (No Type Date): DD 322679 A 19881206

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DD 277636	B5		B24B-009/14	

...Abstract (Basic): The control of the motion of a finisher is carried out with the help of **two** mutually friction-coupled discs arranged coaxially with the form-normal of the **drive** . On these **discs** there is arranged a respective magnet at the **same** **spacing** to the drive axis...

...determine the position of partial edge facets of the spectacle lens.
(3pp Dwg.No.1/ 2)

25/3,K/25 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

008382291 **Image available**
WPI Acc No: 1990-269292/199036
XRPX Acc No: N90-208462

**Centrifugal fertiliser spreader with hopper with two discharge ports -
has two spreader discs adjustable by swivel arms in same sense and by
same angles**

Patent Assignee: RAUCH LANDMASCHFAB GMBH (RAUC-N)

Inventor: RAUCH N

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 385236	A	19900905	EP 90103231	A	19900220	199036 B
DE 3906757	A	19900906	DE 3906757	A	19890303	199037
EP 385236	B1	19941005	EP 90103231	A	19900220	199438
DE 59007365	G	19941110	DE 507365	A	19900220	199444
			EP 90103231	A	19900220	

Priority Applications (No Type Date): DE 3906757 A 19890303

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 385236	A				
-----------	---	--	--	--	--

Designated States (Regional): DE FR GB

EP 385236	B1 G	15	A01C-017/00		
-----------	------	----	-------------	--	--

Designated States (Regional): DE FR GB

DE 59007365	G		A01C-017/00	Based on patent EP 385236	
-------------	---	--	-------------	---------------------------	--

Centrifugal fertiliser spreader with hopper with two discharge ports...

**...has two spreader discs adjustable by swivel arms in same sense and by
same angles**

...Abstract (Basic): The fertiliser spreader has a hopper with **two**
spaced, adjustable outlet openings above spreader **discs** which are
driven controllably by a hydraulic motor and mounted each on a swivel
arm. The **two** discs (26) are adjustable by the swivel arms (30) in the
same direction and by...

...Abstract (Equivalent): Centrifugal spreader for fertilizer, comprising a
storage container with **two** spaced, adjustable outlet openings and in
each case a centrifugal disk placed below each outlet...

...direction out of the operating position below the outlet opening into a
position freeing the **space** below the **same**, characterized in that
both centrifugal disks (26) are adjustable by swinging the pivoting
arms (30)...

...Title Terms: **TWO** ;

25/3,K/26 (Item 19 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

008297154 **Image available**
WPI Acc No: 1990-184155/199024
XRPX Acc No: N90-143077

**Windscreen wiper drive mechanism - has crank arm eccentrically pivoted,
with keeper for latch lever arranged to provide strong resistance to
slippage**

Patent Assignee: GENERAL MOTORS CORP (GENK)

Inventor: BENNER M M; BUCHANAN H C; ROGAKOS D J

Number of Countries: 006 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
-----------	------	------	-------------	------	------	------

US 4924726	A	19900515	US 89361611	A	19890605	199024	B
EP 401970	A	19901212	EP 90304757	A	19900502	199050	
EP 401970	B1	19930324	EP 90304757	A	19900502	199312	
DE 69001153	E	19930429	DE 601153	A	19900502	199318	
			EP 90304757	A	19900502		
EP 401970	A3	19920102	EP 90304757	A	19900502	199320	
ES 2040049	T3	19931001	EP 90304757	A	19900502	199344	

Priority Applications (No Type Date): US 89361611 A 19890605

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 401970	A				
Designated States (Regional): DE ES FR GB IT					
EP 401970	B1	E	14	B60S-001/24	
Designated States (Regional): DE ES FR GB IT					
DE 69001153	E			B60S-001/24	Based on patent EP 401970
ES 2040049	T3			B60S-001/24	Based on patent EP 401970

...Abstract (Basic): upper surface of the driving disc hits the side of the crank arm when the **drive** shaft and driving **disc** rotate in the normal or forward direction. This constrains the crank arm from pivoting in...

...pin with a cylindrical outer surface is fixed to the disc lower surface and is **spaced** from the **same** side of the crank arm that the driving lug contacts...

...Abstract (Equivalent): 54) with a substantially cylindrical surface fixed relative to said drive shaft (14) at a **location spaced** from the **same** side (50) of said crank arm (32) that is engaged by said stop means (52...

...Dwg.1, 2 /9...

...upper surface of the driving disc hits the side of the crank arm when the **drive** shaft and driving **disc** rotate in the normal or forward direction. This constrains the crank arm from pivoting in...

...pin with a cylindrical outer surface is fixed to the disc lower surface and is **spaced** from the **same** side of the crank arm that the driving lug contacts...

25/3,K/27 (Item 20 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007658604 **Image available**

WPI Acc No: 1988-292536/198841

XRFX Acc No: N88-222016

Compact three-phase permanent magnet rotary machine - has coils of particular phase located within sector of circular array of ferromagnetic poles encompassing 2n-1 poles

Patent Assignee: SYNEKTRON CORP (SYNE-N)

Inventor: KONECNY K F

Number of Countries: 015 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4774428	A	19880927	US 8750754	A	19870515	198841	B
EP 291219	A	19881117	EP 88303993	A	19880503	198846	
JP 63294243	A	19881130	JP 88113742	A	19880512	198903	

Priority Applications (No Type Date): US 8750754 A 19870515

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

US 4774428	A		7		
EP 291219	A	E			
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE					

...Abstract (Basic): 1) protruding ferromagnetic poles arranged in a

circular array separated from each other by the **same** number of **slots** located interstitially between the ferromagnetic poles where n is an integer of 1 or more. A permanent magnet assembly has a circular array of **2 (2n+1)+-1** magnetic poles. The armature and the permanent magnet assembly are mounted for...

...USE/ADVANTAGE - For computer **disk drive** , fan. A compact three-phase permanent magnet rotary machine having minimal reluctance torque and electromagnetic...

25/3,K/28 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007401829 **Image available**

WPI Acc No: 1988-035764/198805

XRPX Acc No: N88-026958

Combination lock for briefcase - has combination dials arranged non-axially, with push-buttons for altering combination

Patent Assignee: HWANG B (HWAN-I)

Inventor: HWANG B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4719777	A	19880119	US 8732175	A	19870330	198805 B

Priority Applications (No Type Date): US 8732175 A 19870330

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4719777	A		7		

...Abstract (Basic): Both a hub disc and wheel disc are provided with a recess at the **same location** . Each wheel is drivable by one of the dials when in mesh with that dial...

...The sliding sheet is provided at its **two** opposite sides with **two** inserting tabs. The push button can be pushed downwards when each inserting tab is in alignment with the corresponding recess of the hub disc. Each wheel **disc** of the **driven** wheel is mounted in a corresponding circular aperture in the structural body. Each recess of

...

25/3,K/29 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007130786

WPI Acc No: 1987-130783/198719

XRPX Acc No: N87-097828

Linear motor for e.g. disc player head drive - constrains magnetic flux to vary at constant rate by gaps between fixed yokes

Patent Assignee: SONY CORP (SONY)

Inventor: NIIKURA H

Number of Countries: 010 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 221735	A	19870513	EP 86308267	A	19861023	198719 B
JP 62104467	A	19870514				198725
US 4803388	A	19890207	US 86918151	A	19861014	198908
US 4883994	A	19891128	US 88149698	A	19880129	199006
CA 1283684	C	19910430				199122
US 5023496	A	19910611	US 89395978	A	19890821	199126
EP 221735	B	19911218				199151
DE 3683015	G	19920130				199206
KR 9513270	B1	19951026	KR 868195	A	19860930	199901

Priority Applications (No Type Date): JP 85241144 A 19851028

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 221735	A	E	22		
Designated States (Regional): AT BE FR GB NL					
US 4803388	A		12		
US 4883994	A		12		
US 5023496	A		13		
EP 221735	B				
Designated States (Regional): AT DE FR GB NL					
KR 9513270	B1			H02K-041/02	

Linear motor for e.g. disc player head drive -

...Abstract (Basic): linear motor includes a movable portion (11) which incorporates a plate yoke (13) under which **two** permanent magnets (14,15) are magnetised in the thickness direction, and three arms (13a) ending...

...These rollers run between guide rails (22,23) on the fixed portion (12) in which **two** yokes (19,20) are sepd. by air gaps (25,26...

... 2 /17

...Abstract (Equivalent): A third yoke and a fourth yoke are **spaced** apart the **same** width of a gap as that of the first gap from each other and so arranged in opposed relation to the magnet as to be **spaced** apart the **same** width of a gap as that of the second gap from the magnet. A member...

...The linear motor comprises **two** yokes spaced apart and a current-carrying coil surrounding **two** yokes. A magnet is spaced apart by a width of another gap from the **two** yokes. The end portion of the magnet extends over the gap from **two** yokes...

25/3,K/30 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

004617239

WPI Acc No: 1986-120583/198619

XRPX Acc No: N86-089005

Pump monitor for photo-activation patient treatment system - has sensors distributed circumferentially to detect light blocking tabs on stepper motor driven disc

Patent Assignee: MCNEILAB INC (MCNI)

Inventor: HARTRANFT T P

Number of Countries: 007 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 180453	A	19860507	EP 85307808	A	19851029	198619 B
JP 61109578	A	19860528	JP 85239632	A	19851028	198628
US 4623328	A	19861118	US 84665826	A	19841029	198649
CA 1249756	A	19890207				198908

Priority Applications (No Type Date): US 84665826 A 19841029

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 180453	A	E	27		

Designated States (Regional): DE FR GB IT

... has sensors distributed circumferentially to detect light blocking tabs on stepper motor driven disc

...Abstract (Basic): to the stepper motor shaft (115). The disc provides periodic blocking when used with the **two** photoelectric sensors (113) which each detect the presence or absence of a tab (111). The...

...Abstract (Equivalent): The disc has periodic cutouts about the periphery thus forming periodic tabs and at least **two** sensors fixedly mounted with respect to the tabs for generating a signal in accordance with...

...are spaced in relation to the tabs so that they may be affected by the
same space and may be separated by a tab, but are never separated by
a space or...

25/3,K/31 (Item 24 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

004546871

WPI Acc No: 1986-050215/198608

XRAM Acc No: C86-021095

**Appts. for cutting gobs from flow of plastic material i.e. glass -
comprising two cutting discs driven in contra rotation, each with
holes for passing glass**

Patent Assignee: EMHART IND INC (EMHA)

Inventor: NEBELUNG H H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2163085	A	19860219	GB 8420714	A	19840815	198608 B
US 4592715	A	19860603	US 85762462	A	19850805	198625

Priority Applications (No Type Date): GB 8420714 A 19840815

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2163085	A		9		

**... comprising two cutting discs driven in contra rotation, each
with holes for passing glass**

...Abstract (Basic): Appts. for shearing gobs from a vertical column of
plastic material esp. molten glass, comprises **2**
horizontally-extending blades mounted for turning movement about a
common vertical axis, one blade being...

...Abstract (Equivalent): from a vertical column of plastic material,
partic. molten glass emerging from a feeder, comprises **two** horizontal
blades mounted on a common axis, each having holes of the **same** dia.,
uniformly **spaced** round the axis. A vertical column of glass can pass
through the aligned holes and...

...Title Terms: **TWO** ;

25/3,K/32 (Item 25 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

004540493

WPI Acc No: 1986-043837/198607

XRPX Acc No: N86-032005

**Rotary disc mower - has transmission casing in form of identical box
modules joined by flanges and containing shaft and bevel gears**

Patent Assignee: KUHN SA (KUHN-N)

Inventor: ERMACORA R; NEUERBURG H

Number of Countries: 014 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 171341	A	19860212	EP 85440047	A	19850705	198607 B
AU 8544646	A	19860109				198609
FR 2566992	A	19860110				198609
ZA 8504808	A	19860116				198614
DK 8503038	A	19860107				198618
HU 39045	T	19860828				198643
ES 8605133	A	19860816	ES 544885	A	19850705	198645
US 4720964	A	19880126	US 85751879	A	19850705	198807
FR 2613580	A	19881014				198848
AU 8822259	A	19881215				198906

US 4833868	A	19890530	US 87123292	A	19871118	198926
EP 171341	B	19900404				199014
DE 3576903	G	19900510				199020
US 4947629	A	19900814	US 88268299	A	19881107	199035

Priority Applications (No Type Date): FR 8410916 A 19840706

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 171341 A F 40

Designated States (Regional): AT BE DE GB IT NL SE

EP 171341 B F

Designated States (Regional): AT BE DE GB IT NL SE

...Abstract (Basic): The rotary mower consists of rotary cutting discs (2 ,3) which are driven through a transmission system (14) enclosed in a housing (9) made...

...between them. Each box is made in one piece with its spacing sections, with all **spacing** sections on the **same** sides of the boxes, e.g. on the left, when viewed in the direction of...

...a cylindrical bearing holder whose shaft coincides with that of the corresponding disc. The cutting **discs** are **driven** through bevel gears. The boxes and spacing sections are joined together by bolted flanges on...

...Abstract (Equivalent): A mower comprising rotary cutting elements (2 ,4,3,4) which extend above a housing (9) and are provided with at least one cutting tool (4), where the trajectories (84,85) of said cutting elements (2 ,4;3,4) are intersecting and at least one part of said rotary cutting elements (2 ,4;3,4) are driven by transmission means (106,14,34,35,52) located in...

...housing (9) which comprises casing (26) in which said part of said rotary cutting elements (2 ,4;3,4) are guided in rotation, and bracing elements (27), each one of which determining the distance between **two** adjacent casings (26), where said casing (26) and said bracing elements (27) extend at least...

...the housing (9) and, viewed from above, at least substantially beneath the rotary cutting elements (2 ,4;3,4), one part of said assembly elements (29) extending at the front side...

...Abstract (Equivalent): cutting elements are guided in rotation, and a brace element determines the distance between each **two** adjacent cases. The housing is made up of at least one module formed by a...

...rotary cutting elements are guided in rotation, and a brace determines the distance between each **two** adjacent cases...

25/3,K/33 (Item 26 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

004504700

WPI Acc No: 1986-008044/198602

XRPX Acc No: N86-005720

Folding dish aerial for communications satellite - has two stage opening and closing sequence permitting increase in storable dish diameter

Patent Assignee: MESSERSCHMITT-BOLKOW-BLO (MESR)

Inventor: HEINZE H; HERBIG H

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3423526	A	19860102	DE 3423526	A	19840626	198602 B
FR 2566588	A	19851227				198607
US 4658265	A	19870414	US 85739826	A	19850531	198717
DE 3423526	C	19880811				198832

Priority Applications (No Type Date): DE 3423526 A 19840626

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3423526	A		24		

... has two stage opening and closing sequence permitting increase in storable dish diameter

...Abstract (Basic): closed by an electric motor drive at the centre.

Through a series of ropes it **drives discs** connected to the arms. The arrangement of these discs, associated spindles and the driving ropes...

...The first rope and disc system moves the folded ribs (2) through an initial angle (alpha 1). The second system (8,9,11) then begins to...

...ADVANTAGE - Arms can be of similar length thus permitting construction of larger diameter dish within **same** storage **space** as with present unfolding system...

...Abstract (Equivalent): The foldable dish aerial has ribs (2) which comprise **two** rib parts (3,4) hinged together, the whole being hinged (5) to a carrier (1...

...Abstract (Equivalent): The reflector has ribs (2) journaled to a central body by a journal axis (5). Each rib has a radially...

...Title Terms: **TWO** ;

25/3,K/34 (Item 27 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

004102776

WPI Acc No: 1984-248317/198440

XRPX Acc No: N84-185594

Vacuum shutter valve - with external power drive in form of driving and driven discs , with spiral and shaped slots

Patent Assignee: MOSC ELTRN MACH DES (MOEL-R)

Inventor: LILE V K; LVOV B G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 478535	A	19840615	SU 1963511	A	19731010	198440 B

Priority Applications (No Type Date): SU 1963511 A 19731010

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 478535	A		3		

... with external power drive in form of driving and driven discs , with spiral and shaped slots

...Abstract (Basic): on a Parent Cert. The external power drive is in the form of driving and **driven discs** with spiral (7) and shaped slots, and a box-section component with **two identical slots** (15), at the intersection of which there is a pin (13) acting on a pole...

...3pp Dwg.No. 2 /3)

25/3,K/35 (Item 28 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

004074693

WPI Acc No: 1984-220234/198436

XRPX Acc No: N84-164559

Servo drive for disc camera - has spring drive mechanism with interlocking device for position control which grips edge perforations

Patent Assignee: AGFA-GEVAERT AG (GEVA)
Inventor: ENGELSMANN D; NICKO R
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3306794	A	19840830	DE 3306794	A	19830226	198436 B

Priority Applications (No Type Date): DE 3306794 A 19830226

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3306794	A		13		

Servo drive for disc camera...

...Abstract (Basic): that the disc is rapidly indexed without danger of the ratchet grip falling into the **same slot** again. The servo motor drives the indexing spring drive via a reduction gearing...

...0/ 2

25/3,K/36 (Item 29 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

003365870

WPI Acc No: 1982-M3896E/198238

Typewriter character carrier angular position transducer - has slotted disc attached to rotary body and mounted in housing with window forming light path

Patent Assignee: OLIVETTI & CO SPA (OLIT)

Inventor: MICHELETTI C V

Number of Countries: 007 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 60021	A	19820915				198238 B
BR 8200832	A	19821228				198307
IT 1143507	B	19861022				198831

Priority Applications (No Type Date): IT 8167218 A 19810217

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 60021	A	E	18		

Designated States (Regional): CH DE FR GB LI

...Abstract (Basic): hub being fixed to a toothed wheel engaging with the pinion of an electric motor **drive**. The hub and **disc** rotate in bearings. The transducer includes a housing of opaque plastic material shaped as a parallelepiped and made up by **two** half shells (25,26) which are respectively adjacent to the toothed wheel and a fixed...

...36) and of the windows (62,63) are comparable to the transverse dimensions of these **same slots** and windows. The light is consequently guided by the walls of the tunnel formed by...

25/3,K/37 (Item 30 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

002323762

WPI Acc No: 1980-D0197C/198014

Feed control unit esp. for hay and straw - has two three-phase motors one of which is reversible and drives control disc under hopper

Patent Assignee: HIRLINGER M (HIRL-I)

Inventor: HIRLINGER M

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2840239	A	19800327				198014 B
DE 2840239	C	19850801				198532

Priority Applications (No Type Date): DE 2840239 A 19780915; DE 742960 A 19791018

... has two three-phase motors one of which is reversible and drives control disc under hopper

...Abstract (Basic): goods, esp. for hay or straw or corn, and comprises a motor driven blower with two three-phase motors, a main unit and an adjustment unit, driven by the same electrical...

...weight (34) held by a clamping screw. The normally upper side of the plate has two arcuate closure flanges with a central space which has the same width as the lower end of a feed hopper (15). The control plate may be...

...Title Terms: TWO ;

25/3,K/38 (Item 31 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

001422095

WPI Acc No: 1975-71824W/197543

Variable speed drive monitor, esp. for sewing machines - coding segment masks coding disc having auxiliary signal marks

Patent Assignee: QUICK-ROTAN BECKER (QUIC-N)

Number of Countries: 007 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
NL 7503540	A	19751007				197543 B
DE 2416113	A	19751023				197544
FR 2266889	A	19751205				197604
CH 577686	A	19760715				197634
BR 7501923	A	19761005				197646
GB 1484796	A	19770908				197736
IT 1032594	B	19790620				197940
DE 2416113	C	19840927				198440

Priority Applications (No Type Date): DE 2416113 A 19740403

...Abstract (Basic): A monitor for a variable speed drive, with a coding disc having a series of light and dark stripes distributed uniformly over its surface, driven synchronously...

...line of radiation between the sources and the receivers an additional fixed coding segment with two zones of light and dark stripes, spaced at the same pitch as the stripes of the coding disc and offset to them by half the pitch. Each striped zone of the coding segment has its own receiver, comprising two or more photocells in parallel arranged behind a common lens, the radiation sensitive zones being...

25/3,K/39 (Item 32 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

000669563

WPI Acc No: 1970-06008R/197005

Blender rotor for fluids, semi fluids and gaseous - materials

Patent Assignee: LEROY J CONN (CON -I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
CA 832881	A					197005 B

Priority Applications (No Type Date): CA 993196 A 19670616

...Abstract (Basic): a pair of blades formed at each slot which are cup-shaped and curved in **two** directions. The upper surface of the blade formed on one side of a slot is convex, while the corresponding upper surface formed on the other side of the **same slot** is concave. All of the blades and the entire disc are continuous surfaces free of apertures except for the slots and a central opening in the **disc** to receive a **drive** shaft...

26/3,K/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

003365870

WPI Acc No: 1982-M3896E/198238

Typewriter character carrier angular position transducer - has slotted disc attached to rotary body and mounted in housing with window forming light path

Patent Assignee: OLIVETTI & CO SPA (OLIT)

Inventor: MICHELETTI C V

Number of Countries: 007 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 60021	A	19820915				198238 B
BR 8200832	A	19821228				198307
IT 1143507	B	19861022				198831

Priority Applications (No Type Date): IT 8167218 A 19810217

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 60021	A	E	18		
----------	---	---	----	--	--

Designated States (Regional): CH DE FR GB LI

...Abstract (Basic): hub being fixed to a toothed wheel engaging with the pinion of an electric motor **drive** . The hub and **disc** rotate in bearings. The transducer includes a housing of opaque plastic material shaped as a parallelepiped and made up by **two** half shells (25,26) which are respectively adjacent to the toothed wheel and a fixed...

...36) and of the windows (62,63) are comparable to the transverse dimensions of these **same slots** and windows. The light is consequently guided by the walls of the tunnel formed by the slots and windows and collimated into extremely **narrow** beams. This minimises the influence of axial or isalignment errors and improves the signal-to

File 348:EUROPEAN PATENTS 1978-2002/May W01

(c) 2002 European Patent Office

File 349:PCT FULLTEXT 1983-2002/UB=20020516,UT=20020509

(c) 2002 WIPO/Univentio

Set	Items	Description
S1	29482	DIS???(3N)DRIVE?
S2	2841	S1(3N)(TWO OR 2)
S3	2368	S1(3N)(THIRD OR THREE OR 3 OR ADDITIONAL)
S4	330095	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	309202	OCCUP? OR SITTING OR INSTALL?
S6	34160	(SAME OR IDENTICAL)(3N)(SLOT?? OR SPAC? OR LOCATION?)
S7	78122	MODULAR? OR INTERCHANG?
S8	38911	CARTRIDGE? OR (MAGAZINE? OR STORAGE)(3N)COMPONENT??
S9	1227	S1(S)(TWIGGY OR THIN OR SKINNY OR NARROW?)
S10	2820	(LISA? OR APPLE)(3N)COMPUTER?
S11	13	AU=(COFFIN P?OR COFFIN, P? OR SCHMIDTKE G ? OR SCHMIDTKE, - G? OR LUFFEL R? OR LUFFEL?, R?)
S12	30296	IC=G11B?
S13	5	(S2 OR S3)(S)S4(S)S5(S)S6
S14	5	S13 NOT AD=20000724:20020519
S15	7	S1(3N)S4(S)S6
S16	5	S15 NOT S13
S17	0	S11(S)S8
S18	0	S11(S)S1
S19	1	S9(S)S10

11/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01386479

Reconfigurable cartridge processing module for storing cartridge receiving devices in a data storage system
Rekonfigurierbares Kassettenverarbeitungsmodul zur Speicherung von Kassettenaufnahmeverrichtungen in ein Datenspeichersystem
Module reconfigurable de traitement de cartouches pour stocker des dispositifs de reception de cartouches dans un systeme de stockage de donnees

PATENT ASSIGNEE:

Hewlett-Packard Company, (206037), 3000 Hanover Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Coffin, Paul C., 1816 Serramonte Drive, Fort Collins, CO 80524, (US)
Schmidtke, Gregg S., 4607 Kitchell Way, Fort Collins, CO 80524, (US)
Luffel, Robert W., 1520 42ND Avenue Court, Greeley, CO 80634, (US)

LEGAL REPRESENTATIVE:

Jackson, Richard Eric et al (62281), Carpmiels & Ransford, 43 Bloomsbury Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1176597 A2 020130 (Basic)

APPLICATION (CC, No, Date): EP 2001305435 010622;

PRIORITY (CC, No, Date): US 624798 000724

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-033/12

ABSTRACT WORD COUNT: 197

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200205	652
SPEC A	(English)	200205	7353
Total word count - document A			8005
Total word count - document B			0
Total word count - documents A + B			8005

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01346918

Low profile support system for device rack-mounting
Tragvorrichtung zur Montage einer schmalen Baugruppe in einem Baugruppentrager

Support pour monter un equipement etroit dans une baie

PATENT ASSIGNEE:

Hewlett-Packard Company, (206037), 3000 Hanover Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Luffel, Robert W., 1520, 42nd Avenue Court, Greeley, CO 80634, (US)
Jones, David P., 466 Stratton Park, Bellvue, CO 80512, (US)
Ballard, Curtis C., 12275 Weld County Road 74, Eaton, CO 80615, (US)
Thayer, Nicholas D., 3320 W 7th Street, No. 11, Greeley, CO 80634, (US)

LEGAL REPRESENTATIVE:

Colgan, Stephen James et al (29461), CARPMAELS & RANSFORD 43 Bloomsbury Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1150553 A2 011031 (Basic)

APPLICATION (CC, No, Date): EP 2001303639 010420;
PRIORITY (CC, No, Date): US 556228 000424
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H05K-007/14
ABSTRACT WORD COUNT: 82
NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200144	710
SPEC A	(English)	200144	6221
Total word count - document A			6931
Total word count - document B			0
Total word count - documents A + B			6931

INVENTOR:

Luffel, Robert W ...

11/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01310605

Technique for eliminating end-of-travel dead space in media autochangers
Technik zur Beseitigung der Totraumsendstellung in einem automatischen
Medienwechsler

Technique pour eliminer l'espace mort de fin de course dans un changeur de
media

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover
Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Foslien, Wayne E., 105 49th Avenue Place, Greeley, CO 80634, (US)
Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, CO 80634, (US)
Lester, Matthias W., 1013 Davidson Drive, Apt. C,, Fort Collins, CO 80526
, (US)

Reasoner, Kelly J., 2442 Yorkshire Street, Fort Collins, CO 80526, (US)

LEGAL REPRESENTATIVE:

Jackson, Richard Eric (62281), Carpmiels & Ransford, 43 Bloomsbury Square
, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1120786 A1 010801 (Basic)

APPLICATION (CC, No, Date): EP 2001300282 010115;

PRIORITY (CC, No, Date): US 491938 000126

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-017/22; G11B-015/68

ABSTRACT WORD COUNT: 167

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200131	374
SPEC A	(English)	200131	3374
Total word count - document A			3748
Total word count - document B			0
Total word count - documents A + B			3748

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01289220

Rotatable cartridge engaging assembly
Drehbare Kassettengreiferanordnung
Ensemble rotatif de saisie de cassette

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover
Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Mueller, Robert L., 35126 Cornerstone Way, Windsor, CO 80550, (US)

Jones, David P., 466 Stratton Park, Bellvue, CO 80512, (US)

Luffel, Robert W., 1520 42nd Avenue Court, Greeley, CO 80634, (US)

LEGAL REPRESENTATIVE:

Colgan, Stephen James et al (29461), CARPMAELS & RANSFORD 43 Bloomsbury
Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1107245 A1 010613 (Basic)

APPLICATION (CC, No, Date): EP 2000310649 001130;

PRIORITY (CC, No, Date): US 456464 991208

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-017/22; G11B-015/68

ABSTRACT WORD COUNT: 230

NOTE:

Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200124	958
SPEC A	(English)	200124	5531
Total word count - document A			6489
Total word count - document B			0
Total word count - documents A + B			6489

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01225241

Laterally expandable modular data storage system
Lateral ausdehnbares modulares Datenspeichersystem
Systeme modulaire de stockage de donnees pouvant se dilater lateralement

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover
Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Luffel, Robert W., 1520 42nd Avenue, Court Greeley, CO 80634, (US)

Jones, David P., 466 Stratton Park, Bellvue, CO 80512, (US)

LEGAL REPRESENTATIVE:

Schoppe, Fritz, Dipl.-Ing. (55468), Schoppe, Zimmermann & Stockeler,
Patentanwalte, Postfach 71 08 67, 81458 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1063648 A2 001227 (Basic)

APPLICATION (CC, No, Date): EP 111113 000523;

PRIORITY (CC, No, Date): US 337802 990622; US 371708 990809

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-023/02

ABSTRACT WORD COUNT: 308

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200052	1279
SPEC A	(English)	200052	7167
Total word count - document A			8446
Total word count - document B			0
Total word count - documents A + B			8446

INVENTOR:

Luffel, Robert W ...

11/3,K/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

01225140

Apparatus for translating a cartridge access device

Gerat zum Verschieben einer Kassettenubergabeeinheit

Appareil pour déplacer un dispositif de transport de cassettes

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto,
California 94304-1112, (US), (Applicant designated States: all)

INVENTOR:

Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, CO 80634, (US)

Jones, David P., 466 Stratton Park, Bellvue, CO 80512, (US)

LEGAL REPRESENTATIVE:

Schoppe, Fritz, Dipl.-Ing. (55463), Schoppe, Zimmermann & Stockeler

Patentanwalte Postfach 71 08 67, 81458 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1063646 A2 001227 (Basic)

APPLICATION (CC, No, Date): EP 100590 000112;

PRIORITY (CC, No, Date): US 337802 990622

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-017/00

ABSTRACT WORD COUNT: 143

NOTE:

Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200052	765
SPEC A	(English)	200052	5816
Total word count - document A			6581
Total word count - document B			0
Total word count - documents A + B			6581

INVENTOR:

Luffel, Robert W ...

11/3,K/7 (Item 7 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

01215605

Modular data storage system utilizing a wireless cartridge access device

Modulares Datenspeichersystem unter Verwendung einer drahtlosen

Kassettenzugriffseinheit

**Systeme modulaire de memoire de donnees utilisant un dispositif sans fil
d'accès de cartouche**

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover

Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)
INVENTOR:

Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, CO 80634, (US)
Schmidtke, Gregg S., 4607 Kitchell Way, Fort Collins, CO 80524, (US)

LEGAL REPRESENTATIVE:

Colgan, Stephen James et al (29461), CARPMAELS & RANSFORD 43 Bloomsbury
Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1056086 A2 001129 (Basic)
EP 1056086 A3 010523

APPLICATION (CC, No, Date): EP 2000303272 000418;

PRIORITY (CC, No, Date): US 321142 990527

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-023/02; G11B-023/023; G11B-023/03;

G11B-023/027; G11B-033/04; G11B-023/00; G11B-033/00

ABSTRACT WORD COUNT: 303

NOTE:

Figure number on first page: 5

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200048	1013
SPEC A	(English)	200048	4378
Total word count - document A			5391
Total word count - document B			0
Total word count - documents A + B			5391

INVENTOR:

Luffel, Robert W ...

11/3,K/8 (Item 8 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

01201178

Imaging apparatus alignment system and method

Ausrichtsystem und -verfahren fur ein Bilderzeugungsgerat

Systeme et methode d'alignement d'un appareil imageur

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto,
California 94304, (US), (Applicant designated States: all)

INVENTOR:

Gardener, Jr. Richard Lynn, 2204 41st Avenue, Greeley, Colorado 80634,
(US)

Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, Colorado 80634,
(US)

Irwin, Richard A., 4470 South Lemay Avenue, No. 1010, Fort Collins, CO
80525, (US)

LEGAL REPRESENTATIVE:

Colgan, Stephen James et al (29461), CARPMAELS & RANSFORD 43 Bloomsbury
Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1045326 A2 001018 (Basic)

APPLICATION (CC, No, Date): EP 302297 000321;

PRIORITY (CC, No, Date): US 290429 990413

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06K-007/10; G01B-011/02

ABSTRACT WORD COUNT: 217

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200042	569

SPEC A (English) 200042 11722
Total word count - document A 12291
Total word count - document B 0
Total word count - documents A + B 12291

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01196619

Method and apparatus for exchanging data cartridges in a jukebox data storage system

Methode und Vorrichtung zum Austausch von Datenkassetten in einem Datenspeichersystem vom Typ Jukebox

Methode et dispositif pour echanger de cassettes de donnees dans un syteme de stockage de donnees mettant en oeuvre un juke-box

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Mueller, Robert L., 1600 Edora Court, Unit D, Fort Collins, Colorado 80525, (US)

Coffin, Paul C., 1816 Serramonte Drive, Fort Collins, Colorado 80524, (US)

Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, Colorado 80634, (US)
LEGAL REPRESENTATIVE:

Jackson, Richard Eric (62281), Carpmaels & Ransford, 43 Bloomsbury Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1041551 A2 001004 (Basic)
EP 1041551 A3 020508

APPLICATION (CC, No, Date): EP 2000302050 000314;

PRIORITY (CC, No, Date): US 271550 990318

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-017/00; G11B-017/22; G11B-017/04

ABSTRACT WORD COUNT: 81

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200040	664
SPEC A	(English)	200040	7798
Total word count - document A			8462
Total word count - document B			0
Total word count - documents A + B			8462

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/10 (Item 10 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01186817

Automatic splaying picker finger

Automatisch ausbreitender Finger einer Greifeinrichtung

Doigt de prehension decrochable automatiquement

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto,
California 94304, (US), (Applicant designated States: all)
INVENTOR:
Luffel, Robert Wesley, 1520 42nd Avenue Court, Greeley, Colorado 80634,
(US)
Coffin, Paul Clinton, 1816 Serramonte Drive, Fort Collins, Colorado 80524
, (US)
Mueller, Robert Lee, 35126 Cornerstone Way, Windsor, CO 80550, (US)
LEGAL REPRESENTATIVE:
Jackson, Richard Eric (62281), Carpmaels & Ransford, 43 Bloomsbury Square
, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1033709 A1 000906 (Basic)
APPLICATION (CC, No, Date): EP 301265 000217;
PRIORITY (CC, No, Date): US 259573 990301
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G11B-017/22; G11B-015/68
ABSTRACT WORD COUNT: 185
NOTE:
Figure number on first page: 2,3

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200036	1083
SPEC A	(English)	200036	7695
Total word count - document A			8778
Total word count - document B			0
Total word count - documents A + B			8778

INVENTOR:
Luffel, Robert Wesley ...

11/3,K/11 (Item 11 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01143703

Mail slot data cartridge exchange system for use with a data storage system
Datenkassettenaustauschsystem mit Postschlitz für Datenspeichersystem
Système d'échange de cassettes de données avec fente de courrier pour
utilisation dans un système de stockage de données

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto,
California 94304, (US), (Applicant designated States: all)

INVENTOR:
Thayer, Nicholas D., 3320 West 7th Street, Apt. 11, Greeley, CO 80631,
(US)

Luffel, Robert W., 1520 42nd Avenue Court, Greeley, CO 80634, (US)
Jones, David P., 466 Stratton Park, Bellvue, CO 80512, (US)
Smith, Mark A., Rt. 2, Box 137, Holdredge, Nebraska 68949, (US)

LEGAL REPRESENTATIVE:

Colgan, Stephen James et al (29461), CARPMAELS & RANSFORD 43 Bloomsbury
Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 997896 A2 000503 (Basic)
EP 997896 A3 000913

APPLICATION (CC, No, Date): EP 99308294 991021;

PRIORITY (CC, No, Date): US 179793 981027

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G11B-015/68; G11B-017/22

ABSTRACT WORD COUNT: 87

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200018	651
SPEC A	(English)	200018	9100
Total word count - document A			9751
Total word count - document B			0
Total word count - documents A + B			9751

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/12 (Item 12 from file: 348)
 DIALOG(R)File 348:EUROPEAN PATENTS
 (c) 2002 European Patent Office. All rts. reserv.

00966126

Data cartridge-to-caddy referencing system for a data cartridge handling mechanism within an autochanger

Datenkassetten-zu-Behälter-Referenzierungssystem für Datenkassettenbehandlungsmechanismus in einem automatischen Wechsler

Système de repérage de cassette de données vers réceptacle pour mécanisme de manipulation de cassettes de données dans un changeur automatique

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto, California 94304, (US), (applicant designated states: AT;BE;CH;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)

INVENTOR:

Smith, Mark A., Route 2, Box 137, Holdrege, NE 68949, (US)

Dauner, Daniel R., 2206 Shawnee Court, Fort Collins, CO 80525, (US)

Luffel, Robert W. , 1520 42nd Ave Ct, Greeley, CO 80634, (US)

LEGAL REPRESENTATIVE:

Schoppe, Fritz, Dipl.-Ing. (55463), Schoppe & Zimmermann Patentanwälte Postfach 71 08 67, 81458 München, (DE)

PATENT (CC, No, Kind, Date): EP 877365 A2 981111 (Basic)
 EP 877365 A3 981216

APPLICATION (CC, No, Date): EP 98100477 980113;

PRIORITY (CC, No, Date): US 853608 970509

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: G11B-015/68;

ABSTRACT WORD COUNT: 50

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9846	146
SPEC A	(English)	9846	7086
Total word count - document A			7232
Total word count - document B			0
Total word count - documents A + B			7232

INVENTOR:

... US)

Luffel, Robert W ...

11/3,K/13 (Item 13 from file: 348)
 DIALOG(R)File 348:EUROPEAN PATENTS
 (c) 2002 European Patent Office. All rts. reserv.

00878960

Single-side engaging picker for data cartridges

Einseitige Greifervorrichtung für Datenkassette

Dispositif de saisie par un seul côté de cassettes de données

PATENT ASSIGNEE:

Hewlett-Packard Company, (206030), 3000 Hanover Street, Palo Alto, California 94304, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Luffel, Robert W. , 1520 42nd Avenue Court, Greeley, CO 80634, (US)
 Coffin, Paul, 1816 Serramonte Drive, Fort Collins, CO 80524, (US)
 Dauner, Daniel R., 2206 Shawnee Court, Fort Collins, CO 80525, (US)
 LEGAL REPRESENTATIVE:
 Schoppe, Fritz, Dipl.-Ing. (55463), Patentanwalt, P.O. Box 71 08 67,
 81458 Munchen, (DE)
 PATENT (CC, No, Kind, Date): EP 805444 A1 971105 (Basic)
 APPLICATION (CC, No, Date): EP 97106305 970416;
 PRIORITY (CC, No, Date): US 641442 960429
 DESIGNATED STATES: DE; FR; GB
 INTERNATIONAL PATENT CLASS: G11B-015/68;
 ABSTRACT WORD COUNT: 191
 LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9710W5	514
SPEC A	(English)	9710W5	4467
Total word count - document A			4981
Total word count - document B			0
Total word count - documents A + B			4981

 INVENTOR:
Luffel, Robert W ...
 ?

14/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01108523

Method and apparatus for moving a carriage assembly from an initial position to a target position
Verfahren und Vorrichtung zum Bewegen einer Wagenanordnung von einer Anfangsposition zu einer Zielposition
Methode et appareil pour deplacer un assemblage de chariot d'une position initiale a une position cible

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (Applicant designated States: all)

INVENTOR:

Getreuer, Kurt Walter, 1115 Golden Hills Rd., Colorado Springs, Colorado 80919, (US)

LEGAL REPRESENTATIVE:

Leone, Mario et al (87922), Societa Italiana Brevetti. Via Carducci, 8, 20123 Milano, (IT)

PATENT (CC, No, Kind, Date): EP 971343 A2 000112 (Basic)

APPLICATION (CC, No, Date): EP 99201549 960125;

PRIORITY (CC, No, Date): US 376882 950125; US 420899 950411

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 724255 (EP 96300540)

INTERNATIONAL PATENT CLASS: G11B-007/085

ABSTRACT WORD COUNT: 188

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200002	1787
SPEC A	(English)	200002	87861
Total word count - document A			89648
Total word count - document B			0
Total word count - documents A + B			89648

...SPECIFICATION move in opposite directions under the influence of the tiller 1-76. The S-shaped slot 1-281 in the right slider 1-73 also opens toward the right outer side...as shown by arrow 2-19 in Fig. 31, towards the surface of the optical disc 2 -76. Conversely, when current is applied such that current travels through the coils 2-18...the lens holder 2-14 and associated objective lens 2-12 closer to the optical disc 2 -76. Because the lines of magnetic flux curve as described above, the direction of the...

14/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00939426

Optical disc system
System fur optische Platten
Systeme de disque optique

PATENT ASSIGNEE:

Discovision Associates, (260275), 2355 Main Street, Suite 200, Irvine, CA 92614, (US), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;IE;IT;LI;NL;PT;SE)

INVENTOR:

Crupper, Randolph Scott, 308 High Street, P.O. Box 731, Palmer Lake, CO 80133, (US)

Grassens, Leonardus Johannes, 19115 Pebble Beach Way, Monument, CO 80132, (US)

Davis, Marvin Benjamin, 2813 Palmer Park Boulevard, Colorado Springs, CO 80909, (US)

Lewis, David Earl, 14820 Spiritwood Loop, Black Forest, CO 80106, (US)

Getreuer, Kurt, Walter, 5055 Horseshoe Bend, Colorado Springs, CO 80917, (US)

Schell, David Louis, 5307 Borrego Drive, Colorado Springs, CO 80918, (US)

LEGAL REPRESENTATIVE:

Leone, Mario et al (87921), Societa Italiana Brevetti S.p.A. Piazza di Pietra 39, 00186 Roma, (IT)

PATENT (CC, No, Kind, Date): EP 853313 A2 980715 (Basic)

APPLICATION (CC, No, Date): EP 98200192 960118;

PRIORITY (CC, No, Date): US 376882 950125

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 726564 (EP 963003504)

INTERNATIONAL PATENT CLASS: G11B-007/125;

ABSTRACT WORD COUNT: 70

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	9829	694
----------	-----------	------	-----

SPEC A	(English)	9829	88210
--------	-----------	------	-------

Total word count - document A	88904
-------------------------------	-------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	88904
------------------------------------	-------

...SPECIFICATION drive 1-10. It is this rotation of the lever arm 1-275 which has **installed** the bias coil assembly 1-94 into the disc cartridge 1-13. Since the lift...12 beneath the center of a desired information track on the surface of the optical **disc** 2 -76.

Movement of the actuator 2-10 to effect focusing is produced when current is...

14/3,K/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

00937326

Method of changing rotational rate of storage medium from initial rate to desired rate

Verfahren zur Anderung der Drehgeschwindigkeit eines Speichertragers von einer Anfangsgeschwindigkeit auf eine gewünschte Geschwindigkeit

Methode de changement de vitesse de rotation d'un support d'informations d'une vitesse initiale a une vitesse desiree

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (Applicant designated States: all)

INVENTOR:

Crupper, Randolph Scott, 308 High street, PO Box 731, Palmer Lake, Colorado 80133, (US)

Davis, Marvin Benjamin, 2813 Palmer Park Blvd., Colorado Springs, Colorado 80909, (US)

Getreuer, Kurt Walter, 115 Golden Hills Rd., Colorado Springs, Colorado 80919, (US)

Grassens, Leonardus Johannes, 19115 Pebble Beach Way, Monument, Colorado 80132, (US)

Lewis, David Earl, 14280 Spiritwood Loop, Black Forest, Colorado 80106, (US)

Schell, Davis Lewis, 5307 Borrego Drive, Colorado Springs, Colorado 80918, (US)

LEGAL REPRESENTATIVE:

Bazzichelli, Alfredo et al (40161), c/o Societa Italiana Brevetti S.p.A. Piazza di Pietra, 39, 00186 Roma, (IT)

PATENT (CC, No, Kind, Date): EP 852379 A2 980708 (Basic)

EP 852379 A3 000202

APPLICATION (CC, No, Date): EP 98101056 960118;

PRIORITY (CC, No, Date): US 376882 950125
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 726564 (EP 96300350)
INTERNATIONAL PATENT CLASS: G11B-019/26; G11B-019/28
ABSTRACT WORD COUNT: 107
NOTE:

Figure number on first page: 5

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9828	663
SPEC A	(English)	9828	88273
Total word count - document A			88936
Total word count - document B			0
Total word count - documents A + B			88936

...SPECIFICATION drive 1-10. It is this rotation of the lever arm 1-275 which has **installed** the bias coil assembly 1-94 into the disc cartridge 1-13. Since the lift...12 beneath the center of a desired information track on the surface of the optical **disc** 2 -76.
Movement of the actuator 2-10 to effect focusing is produced when current is...

14/3,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00921020

Optical disc system having current monitoring circuit with controller for laser driver and method for operating same
Optisches Plattensystem mit Stromuberwachungsschaltung mit Lasertreibersteuerungseinheit, und Verfahren zu deren Betrieb
Systeme de disque optique avec circuit de surveillance de courant avec dispositif de commande d'un laser, et methode de fonctionnement

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (applicant designated states:
AT;BE;CH;DE;ES;FR;GB;IE;IT;LI;NL;PT;SE)

INVENTOR:

Crupper, Randolph Scott, 308 High Street, PO Box 731, Palmer Lake, Colorado 80133, (US)
Davis, Marvin Benjamin, 2813 Palmer Park Blvd., Colorado Springs, Colorado 80909, (US)
Getreuer, Kurt Walter, 115 Golden Hills Rd., Colorado Springs, Colorado 80919, (US)
Grassens, Leonardus Johannes, 19115 Pebble Beach Way, Monument, Colorado 80132, (US)
Lewis, David Earl, 14820 Spiritwood Loop, Black Forest, Colorado 80106, (US)
Schell, David Louis, 5307 Borrego Drive, Colorado Springs, Colorado 80918, (US)

LEGAL REPRESENTATIVE:

Bazzichelli, Alfredo et al (40161), c/o Societa Italiana Brevetti S.p.A. Piazza di Pietra, 39, 00186 Roma, (IT)

PATENT (CC, No, Kind, Date): EP 840309 A2 980506 (Basic)
EP 840309 A3 990414

APPLICATION (CC, No, Date): EP 97118099 960118;

PRIORITY (CC, No, Date): US 376882 950125
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 726564 (EP 963003504)
INTERNATIONAL PATENT CLASS: G11B-011/10; G11B-007/09;
ABSTRACT WORD COUNT: 115

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9819	2633
SPEC A	(English)	9819	88350
Total word count - document A			90983
Total word count - document B			0
Total word count - documents A + B			90983

...SPECIFICATION of the disc 1-14 (Figs. 23-25) when the disc cartridge 1-13 is **installed** in the disc drive 1-10. An ejection mechanism according to the present invention is...1-136 (Fig. 15A) of the cartridge receiver 1-82 rides in the left vertical **slot** 1-130 of the base plate 1-46. The left lift pin is longer than...needed to bring the light beam into the desired focus condition with respect to the **disc 2** -76. When radial or tracking movement is required to position the objective lens 2-12 beneath the center of a selected track on the optical **disc 2** -76, current is applied to the tracking coil 2-16. The current interacts with the...

14/3,K/5 (Item 5 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

00741338

Connectionless communications system, test method, and intra-station control system

Verbindungsloses Kommunikationssystem, Testmethode und Intra-Station-Steuerungssystem

Système de communication sans connection, méthode de test et système de gestion intra-station

PATENT ASSIGNEE:

FUJITSU LIMITED, (211460), 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa 211, (JP), (applicant designated states: DE;FR;GB)

INVENTOR:

Kobayasi, Yasusi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Watanabe, Yoshihiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Nishida, Hiroshi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Izawa, Naoyuki, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Murayama, Masami, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Abe, Jin, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Uchida, Yoshihiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Yamanaka, Hiromi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Aso, Yasuhiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Tsuruta, Yoshihisa, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Kato, Yoshiharu, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Kakuma, Satoshi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Uriu, Shiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Samejima, Noriko, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Ishioka, Eiji, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Sekine, Shigeru, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Karakawa, Yoshiyuki, Fujitsu Kyushu Communication, Systems Ltd.,

Yasudaseimeihakata Blg., 1-4-4,, Hakataekimae, Hakata-ku, Fukuoka, 812,
(JP)

Kagawa, Atsushi, c/o Fujitsu Communication, Systems Ltd., 3-9-18,
Shinyokohama, Kouhoku-ku, Yokohama-shi, Kanagawa, 222, (JP)

Nakayama, Mikio, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
Kawasaki-shi, Kanagawa, 211, (JP)

Kawataka, Miyuki, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
Kawasaki-shi, Kanagawa, 211, (JP)

LEGAL REPRESENTATIVE:

Ritter und Edler von Fischern, Bernhard, Dipl.-Ing. et al (9672),
Hoffmann, Eitle & Partner, Patentanwalte, Arabellastrasse 4, D-81925
Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 700229 A2 960306 (Basic)
EP 700229 A3 990203

APPLICATION (CC, No, Date): EP 95113111 950821;

PRIORITY (CC, No, Date): JP 94255120 940822

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: H04Q-011/04

ABSTRACT WORD COUNT: 170

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	8491
SPEC A	(English)	EPAB96	164543
Total word count - document A			173034
Total word count - document B			0
Total word count - documents A + B			173034

...SPECIFICATION However, since the amount of the above described
information is not small, the tag information **occupies** about 10 bytes.
Adding such tag information to a cell makes the entire cell length...

...the destination terminals 4-1 - 4-5. That is, the bands of 5 channels
are **occupied**.

Thus, since N paths are set between the source terminal and
destination terminal when 1...system. The OMP hardware components (refer
to Figure 26) are as follows.

* CPU (including memory), **disk drives**, and a floppy **disk drive**

* CRT display (used as a graphical user interface (GUI)

* Keyboard

* Mouse

* Hard disk

* Cartridge tape...slot which has sent back an answer, and that it is
not mounted for the **slot** which returned no answer.

The firmware performs these processes only for load-recognized slots.

(2...

?

16/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00795836

Apparatus and method for suppression of electromagnetic interference
Gerat und Verfahren zur Unterdruckung elektromagnetischer Interferenz
Appareil et methode pour la suppression d'interference electromagnetique
PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA
92714, (US), (applicant designated states:
AT;BE;CH;DE;ES;FR;GB;IE;IT;LI;NL;PT;SE)

INVENTOR:

Davis, Marvin Benjamin, 2813 Palmer Park Blvd., Colorado Springs, CO
80909, (US)
Schell, David Louis, 5307 Borrego Drive, Colorado Springs, CO 80918, (US)

LEGAL REPRESENTATIVE:

R.A. KUHNEN & P.A. WACKER (101501), Patentanwaltsgesellschaft mbH
Alois-Steinecker-Strasse 22, 85354 Freising, (DE)

PATENT (CC, No, Kind, Date): EP 741508 A2 961106 (Basic)
EP 741508 A3 981028

APPLICATION (CC, No, Date): EP 96301967 960321;

PRIORITY (CC, No, Date): US 420381 950411

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE

INTERNATIONAL PATENT CLASS: H05K-009/00; G11B-033/14; G11B-007/12;

H01S-003/025; G11B-011/10; G11B-007/09; G11B-007/085; G11B-007/135;

G11B-017/04; G11B-019/00; G11B-020/10; G11B-025/04; G11B-033/02

ABSTRACT WORD COUNT: 169

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	733
SPEC A	(English)	EPAB96	90500
Total word count - document A			91233
Total word count - document B			0
Total word count - documents A + B			91233

...SPECIFICATION of the container. The laser light source and auxiliary electronics are disposed in the interior **space**. A conductor passes into the container through a groove formed in an exterior wall of...data from and writes encoded data to a 90 millimeter optical disc received by a **replaceable** optical **disc drive** 7-432, which is controlled by disk-drive electronics 7-434. The read/write head...

16/3,K/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00397281

Magnetic disk drive.

Gerat mit Magnetplatten.

Tourne-disque magnetique.

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road,
Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Glaser, Thomas William, Route 8, Box 183, Rochester, Minnesota 55902,
(US)

Greenberg, Richard, 748 Northern Hills Drive N.E., Rochester, Minnesota
55904, (US)

Misso, Nigel Frank, 5714 Silas Dent Road N.W., Rochester, Minnesota 55901,
(US)

Schopp, Robert Ellsworth, 2712 17th Avenue N.W., Rochester, Minnesota
55901, (US)

LEGAL REPRESENTATIVE:

Moss, Robert Douglas (34141), IBM United Kingdom Limited Intellectual

Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)
 PATENT (CC, No, Kind, Date): EP 381408 A1 900808 (Basic)
 APPLICATION (CC, No, Date): EP 90300884 900129;
 PRIORITY (CC, No, Date): US 304996 890131
 DESIGNATED STATES: DE; FR; GB
 INTERNATIONAL PATENT CLASS: G11B-033/08;
 ABSTRACT WORD COUNT: 206

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	400
SPEC A	(English)	EPABF1	2553
Total word count - document A			2953
Total word count - document B			0
Total word count - documents A + B			2953

...SPECIFICATION using systems provide space in their designs. Rigid disk drives have generally been adapted to **replace** a flexible **disk drive** in the **same space** and have therefore been required to meet the same standard dimensions in order to obtain...

16/3,K/3 (Item 3 from file: 348)
 DIALOG(R)File 348:EUROPEAN PATENTS
 (c) 2002 European Patent Office. All rts. reserv.

00397280

Magnetic disk drive.

Magnetplatteneinheit.

Unite de disque magnetique.

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road, Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Rigotti, James Michael, 2605 Oslo Court N.E., Rochester, Minnesota 55904, (US)

Tufty, Lyle Rick, RRI Box 151, Elgin, Minnesota 55932, (US)

Zell, Michael Norman, 3542 Ogden Court N.E., Rochester, Minnesota 55904, (US)

LEGAL REPRESENTATIVE:

Moss, Robert Douglas (34141), IBM United Kingdom Limited Intellectual

Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 381407 A1 900808 (Basic)
 EP 381407 B1 950705

APPLICATION (CC, No, Date): EP 90300883 900129;

PRIORITY (CC, No, Date): US 305236 890131

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: G11B-033/12; G11B-033/02; G11B-025/04;

ABSTRACT WORD COUNT: 168

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	488
CLAIMS B	(English)	EPAB95	488
CLAIMS B	(German)	EPAB95	410
CLAIMS B	(French)	EPAB95	529
SPEC A	(English)	EPABF1	2154
SPEC B	(English)	EPAB95	2196
Total word count - document A			2642
Total word count - document B			3623
Total word count - documents A + B			6265

...SPECIFICATION has been a defacto standard usually set by the dimensions previously selected for a flexible **disk drive** that is subsequently **replaced** by the hard **disk drive**. The hard **disk** file must fit into the **same space** previously occupied by the flexible disk drive, and

thus the form factor dimensions are established...

...SPECIFICATION has been a defacto standard usually set by the dimensions previously selected for a flexible **disk drive** that is subsequently **replaced** by the hard **disk drive**. The hard **disk** file must fit into the **same space** previously occupied by the flexible disk drive, and thus the form factor dimensions are established...

16/3,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

00397162

Placement of electrical components within a magnetic disk drive.

Anordnung elektrischer Komponenten in einem Magnetplattenantrieb.

Placement des composants electriques dans une unite d'entrainement de disques magnetiques.

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road,
Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Vettel, Gerald Michael, 225 2nd Street S.W., Pine Island, Minnesota 55963
, (US)

Rigotti, James Michael, 2605 Oslo N.E., Rochester, Minnesota 55904, (US)

Tufty, Lyle Rick, RR1 Box 151, Elgin, Minnesota 55932, (US)

LEGAL REPRESENTATIVE:

Moss, Robert Douglas (34141), IBM United Kingdom Limited Intellectual
Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 395195 A2 901031 (Basic)

EP 395195 A3 910306

EP 395195 B1 941005

APPLICATION (CC, No, Date): EP 90300756 900124;

PRIORITY (CC, No, Date): US 305226 890131

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: G11B-033/12; G11B-033/14; G11B-025/04;

G11B-031/00;

ABSTRACT WORD COUNT: 170

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	508
SPEC A	(English)	EPABF1	2594
Total word count - document A			3102
Total word count - document B			0
Total word count - documents A + B			3102

...SPECIFICATION using systems provide space in their designs. Rigid disk drives have generally been adapted to **replace** a flexible **disk drive** in the **same space** and have therefore been required to have the same dimensions in order to fit using...

16/3,K/5 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2002 WIPO/Univentio. All rts. reserv.

00153060

PARALLEL MACHINE ARCHITECTURE FOR PRODUCTION RULE SYSTEMS

ARCHITECTURE DE MACHINE PARALLELE POUR DES SYSTEMES DE REGLES DE PRODUCTION

Patent Applicant/Assignee:

MARTIN MARIETTA ENERGY SYSTEMS INC,

Inventor(s):

ALLEN John Daniel Jr,

BUTLER Philip Lee,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8809972 A1 19881215

Application: WO 88US1901 19880609 (PCT/WO US8801901)
Priority Application: US 87976 19870609
Designated States: AT BE CH DE FR GB IT JP LU NL SE
Publication Language: English
Fulltext Word Count: 138162

Fulltext Availability:
Detailed Description

Detailed Description

... concept may be extended to allow all rule processors
SUBSTIsTiTER 5-HAZONET
access to a **disk drive** by requesting a transfer from the
host. However, as in the virtual terminalSF the...processors on all
boards at the same time. Moreover, the
host network address accesses the **same memory location** in
all of the rule processors which may be any location
within the 512...and is not required in the host
memory (Fig. 54A), Reserved area 560 is the **same** address
space for all of the RP's and is used by the host for both
window...slightly
different location requirements in each processor. By
sending the "stream" to the network buffer **locations** ,,
which are **identical** for all rule processors, the host has

19/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00449403 **Image available**

REPLICATING FORMS FROM HTML TEMPLATES

**SYSTEME PERMETTANT LA COMMUNICATION ENTRE UN CLIENT ET DES PROGRAMMES
SERVEUR NON RESIDENTS**

Patent Applicant/Assignee:

INTERNATIONAL BUSINESS MACHINES CORPORATION,

Inventor(s):

BRANDT Marcia Lynn,
DICECCO Joseph Vincent,
HANSEN Jason Robert,
O'KEEFE Timothy Jude,
OLSON Diane Elaine,
SNYDER Devon Daniel,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9839867 A2 19980911

Application: WO 98US2180 19980130 (PCT/WO US9802180)

Priority Application: US 97810156 19970225

Designated States: JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 12344

Fulltext Availability:

Detailed Description

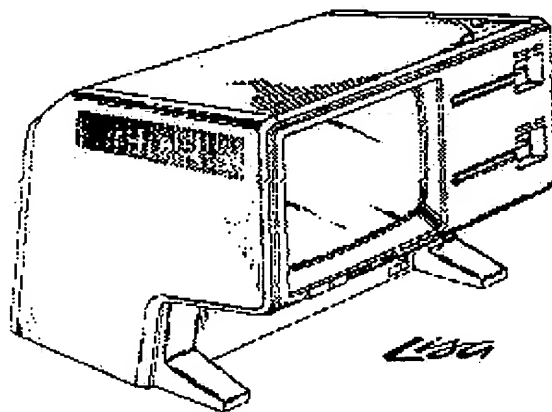
Detailed Description

... 150 could be other types of computer systems, whether they be microcomputers such as an **Apple** Macintosh or mainframe **computers** such as an IBM System/390, and still fall within the spirit and scope of...

...computer such as an Internet appliance or thin client that does not have a fixed **disk drive**. It will be readily appreciated that the principles of the invention may apply to other...

Lisa/Macintosh XL Do-it-yourself Guide

published by Sun Remarketing, Inc.



Contents

EX LIBRIS:

David T. Craig <71533.606@compuserve.com>

HTML-ified by Marion Bates <woz@coos.dartmouth.edu>

August 23, 1998

Last modification: December 30, 1998

[Back to Raoul's Lisa Webserver index](#)

Table of Contents

<u>1</u>	Identifying the Models
<u>3</u>	Lisa/XL Disassembly Procedure
<u>11</u>	Automatic Startup Test
<u>19</u>	Lisa/Mac XL Test Diskette
<u>20</u>	Built-in Service Mode
<u>29</u>	Hard Drive Repairs
<u>34</u>	MacWorks Plus
<u>37</u>	800K Disk Drive Upgrade
<u>39</u>	Expansion Card Upgrades
<u>40</u>	Internal Hard Drive Upgrades
<u>40</u>	Memory Upgrades
<u>41</u>	Video Upgrades-External Monitors
<u>41</u>	Video Upgrades-Internal Monitor-Macintosh XL Screen Kit
<u>47</u>	Summary
<u>49</u>	Appendix A-General Troubleshooting

[Next](#)

[Home](#)

I/O board is also different. There's no socket for the AMD 9512 coprocessor. There's no nickel-cadmium battery backup for the real time clock. The disk drive controller is different. An extra chip on the I/O board replaces the Lisa Lite Adapter which was formerly located in the drive cage. The disk drive cabling is different. The wiring harness is different. The power supply is different. One megabyte of RAM is standard. If you have Lisa OS disks, a 10MB internal hard drive, no Lisa Lite card, no external parallel connector, and a 1.8-A 110/220V power supply, yours is at least a Lisa 2/10.

Macintosh XL: The Macintosh XL is exactly the same as a Lisa 2/10. Only the sticker on the box, the operating system, and the instruction manuals are different. Instead of Lisa OS, the bundled OS is Macintosh System software and MacWorks XL, a Lisa program which allows 64K Macintosh ROM emulation. If you have MacWorks XL instead of Lisa OS disks, a 10MB internal hard drive, no Lisa Lite card, and a 1.8-A power supply, yours is probably a Macintosh XL.

Regardless of which model you own, all Lisa/XL's are easily repaired. The next two sections show how to get a dead Lisa going again. The section after that shows how to turn it into a super deluxe, big-screen Macintosh Plus.

Table 1 Hardware Configuration Checklist

This sample table reflects a fully upgraded Lisa 2/5

Item	Check	Model#/Notes
400K internal floppy		
800K internal floppy	✓	Sony# MPF-51W
Lite adapter	✓	Apple# 620-149
Internal hard drive	✓	Sun 20MB SCSI
1.2-A power supply		
1.8-A power supply	✓	Jumpered for 110 V AC
System I/O board	✓	Apple# 620-0117 (Lisa 2/5)
CPU board	✓	Apple# 620-0119
Memory 1 board	✓	Apple# 620-0112 (512K)
Memory 2 board	✓	Apple# 620-0112 (512K)
Screen kit transformer	✓	Properly installed
ROM version	✓	3A/AB (XL screen kit)

Lisa/XL Disassembly Procedure

All Lisa/XL models are built on the same chassis and come apart the same way, without tools. Before beginning, shut down the Lisa (if it's on) and physically disconnect the power cord from the back of the computer. To remove the front panel place your hands along the bottom edge, feel for the two finger grips, and push up gently as shown in Figure 1. Pushing up disengages two plastic tabs, swings the front panel forward, and opens a safety switch in the lower left corner of the chassis. If the computer is on, removing the front panel will immediately turn it off. Since this is not the recommended way to power down, always remember to Save your work and Shut Down before removing the panel.

The disk-drive assembly is held in place by a spring-loaded knurled nut as shown in Figure 2. To remove the entire disk-drive cage, loosen the nut until it springs free and then pull straight back. The cage slips out easily. Normally, the wiring harness is just long enough to allow you to set the assembly down in front of the computer. Take care not to snag or overextend the drive cables. As shown in Figure 3, there's not much slack!

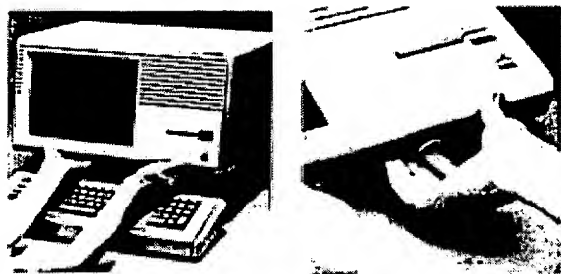


Figure 1 To remove the front panel, feel for the finger grips at the bottom edge and push up gently.

Once the drive cage is out, note whether the floppy drive ribbon cable is routed to a connector at the back of the cage or whether it's connected to a Lisa Lite Adapter mounted in the lower left-rear portion of the drive cage. A Lite Adapter indicates that the computer is a Lisa 2. Direct connection suggests a Mac XL. You can remove the internal disk drive by tilting the drive cage forward

[Next](#)

[Back](#)

[Contents](#)

disk, defined as any disk containing System and Finder files. It's simple.

The Lisa/Mac XL boot procedure is more complicated, because Lisas were designed to run multiple operating systems (Lisa Office System, Lisa Pascal Workshop, MacWorks XL, MacWorks Plus, etc.). That capability precludes putting half of any particular operating system in ROM. Instead, 100% of whatever OS you choose to run has to be loaded from disk. In practice, the allowable operating systems are permanently installed on one of seven partitioned hard disks, where they load automatically, according to modifiable startup preferences, upon completion of the module tests. If your Lisa or Macintosh XL is equipped with a SCSI hard disk, MacWorks Plus must be loaded from a floppy disk to recognize your SCSI drive.

If you own a SCSI drive, there's no hard disk connected, or if it's powered down, two buttons appear on the Lisa/XL screen instead. **To load MacWorks from a floppy** (as might be necessary on the repair bench), click the "Startup From. . ." button, insert a MacWorks 3.0, MacWorks XL, or MacWorks Plus disk, then click the disk drive icon. If you boot MacWorks 3.0 or MacWorks XL, 64K ROM emulation will load into RAM. If you boot MacWorks Plus, 128K ROM emulation will load into RAM. Upon completion, the MacWorks disk kicks out, and the familiar blinking 3.5- inch floppy disk icon appears. If you have a SCSI drive, the system on your drive will load. From that point forward, the machine will operate just like any other Macintosh.

One Caveat: Following through with inappropriate versions of the System and Finder will crash the machine. Acceptable System/Finder combinations for use with MacWorks 3.0 and MacWorks XL include 2.0/4.1 and 3.2/5.3. These are the exact same limitations that 512K Macs have. Additionally, you must load the System and Finder from an MFS (Macintosh File System) disk. HFS (Hierarchical File System) disks are not recognizable on any Mac under the 64K ROMs.

MacWorks Plus version 1.07 or greater requires at least System/Finder 6.02/6.1. In this case, previous versions of the System and Finder result in a crash. The important thing to remember is that system crashes of this nature have nothing to do with the hardware. Once you get to the blinking floppy disk icon, you can assume that the machine is OK. If your computer restarts after this point, the problem is most likely with the system folder. It may also fail if you only have 512K RAM installed.

Lisa/Mac XL Test Diskette

The Lisa/Mac XL test diskette tests the electronic components in the Lisa/Mac XL system. This test will determine if any of the electronic boards or devices are defective and need to be replaced.

To start the test, insert the test diskette and turn on the computer. Shortly after the computer is turned on you will hear a soft click. When you hear the click, press the space bar a few times. The next screen that will appear will be the "startup from" screen. Startup from the floppy drive by pressing the Ilk 2 keys.

The next screen will show the version of the Lisa/Mac XL test you are using as well as the the release date of that version. If you have a screen modification kit you must use the Mac XL/Lisa screen modification kit diagnostics version 1.0. If you do not have a screen modification kit you must use Lisa/Mac XL Test Release 3.0. This screen will then disappear and the following screen will appear.

Usa/Mac XL Test will test all the electronics in the system, including the following:

CPU board
Memory Boards
I/O Boards Diskette Drive (Optional)
Profile (Optional)

The complete system check will take approximately 40-minutes if you select the short test or 12-hours if you select the overnight test. If you don't want to test this system, click Turn Off.

Overnight

Short

Turn Off

Selecting either the overnight or short test will then give you a new screen asking you if you want to test the diskette drive, continue to the next item to test or turn off. After the test of the drive or if you select continue the next screen will give you the same options except this will be to test the hard drive.

When the test of the hard drive is complete or continue is selected, the computer will start the test of the CPU Board. You

[Next](#)

[Back](#)

[Contents](#)

Internal Hard Drive Upgrades

Through the years several hard drive options have been available. New technologies in both operating systems and the hard drives themselves make one option optimal, the Sun 40 SCSI. The Sun 40 SCSI is a true SCSI hard drive mounted on a SCSI card (see figure 30) that fits internally in the Lisa or Mac XL via one of the expansion ports. The SCSI card also allows you to connect external SCSI devices to your computer as well.

There are several reasons that this upgrade is so optimal. It uses the latest SCSI hard drive technology which offer greater speed and reliability. It also requires that you boot MacWorks Plus from a floppy. This small inconvenience allows the SCSI drive to be formatted 100% Macintosh. As a clean Macintosh drive you will be able to fix troubles using programs like *Norton Utilities*. Older hard drive options require that two environments exist on the hard drive. This made user repairs virtually unheard of.

Memory Upgrades

Early AST Ramstack upgrades (long since discontinued) took the Lisa/XL to 1.5Mb or 2.0Mb. RAM cards recently developed for the Lisa/XL use PC-style 256Kx9 single inline memory modules (SIMMS). Upgrading beyond 2Mb requires CPU board modifications as well. Although the MC68000G8 process or can logically address 16 Mb, the original design of the Lisa/XL CPU board contains only enough physical address lines for 2Mb. By contrast, the 128K to 512K Mac CPU board contains just 0.5Mb of physical address lines, and the Mac Plus CPU board contains physical address lines for 4Mb. The necessary CPU board modifications add extra memory addresses, allowing you to populate the Lisa SIMM card all the way to 4Mb.

Video Upgrades-External Monitors

All Lisa/Mac XL computers are equipped with a composite video out connector. As shown in Figure 28, the video connector is a standard RCA jack located just to the right of the reset button, at the rear of the computer. This connector accepts ordinary RCA phono cables, defined as shielded 2-conductor wire with an RCA phono plug on each end. Unlike the Macintosh 128K to Macintosh 11, it's not necessary to buy or build an add-on video card to use an external monitor on the Lisa/Mac XL. All you need is an external monitor with auto synchronous multiscanning capability and a matching composite video-in connector.

Video Upgrades-Internal Monitor Macintosh XL Screen Kit

No recently restored Lisa/Mac XL is complete without a Macintosh XL Screen Kit. Unlike the standard 9-inch Macintosh which has square pixels, the stock Lisa/XL has rectangular pixels. With rectangular pixels, circles look like footballs, squares look like spaghetti boxes. The purpose of the Macintosh XL Screen Kit is to square up the pixels. Proportions become exactly the same as on other Macs (1 to 1), but the overall display area (608 pixels x 432 pixels) is made roughly the same as a 12-inch Macintosh 11 WYSIWYG monitor (640 x 480). Standard 9-inch Macs only display 512 x 342 pixels.

The complete screen modification kit includes new 3A boot ROMs, a new video ROM and a new yoke coil. (Newer software requires System Update 5.0 and MacWorks Plus as well.) Conscientious installation of the complete screen kit requires one to two hours. This summary will give you an idea of everything that's involved:

[Next](#)

[Back](#)

[Contents](#)

Lisa/Macintosh XL Do-it-yourself Guide

Many people believe that Lisas and Macintosh XL's are exactly the same computer. In truth, Lisas and XL's only look the same. There are two different models in the series. The Macintosh XL (a.k.a. Lisa 2/10) is the newest model. Since there are differences between the models, it's important to determine which Lisa/Mac XL you own before beginning any upgrade or repair work.

Identifying the Models

This section lists the official hardware configurations. Hardware means a specific combination of drives, boards, and so on. By identifying what hardware is inside the box, you can easily determine which model of the Lisa you own. Table 1 provides a checklist. The next section provides illustrated disassembly instructions so that you can match your particular hardware configuration against the list.

Lisa 2: The Lisa 2 has one 3.5-inch 400K disk drive, different disk drive controller circuitry, and a redesigned front panel to accommodate the single 3.5-inch drive opening. A 400K floppy controller, labeled the "Lisa Lite Adapter," is mounted inside the disk drive cage. The System I/O board is socketed for an AMD 9512 arithmetic processor. It has nickel-cadmium battery backup for the real time clock. One 512K memory board is standard. The mother board has a mouse connector, two serial connectors, and an external parallel connector. The power supply is rated 1.2 A.

Lisa 2/10: The Lisa 2/10 has a completely different motherboard. The mouse connector is different. There's no external parallel connector on the back of the computer. Instead, there's an internal parallel connector and a 10MB internal I hard drive. An interrupt switch has been added. The system

[Next](#)

[Contents](#)

File 9:Business & Industry(R) Jul/1994-2002/May 16
(c) 2002 Resp. DB Svcs.
File 15:ABI/Inform(R) 1971-2002/May 20
(c) 2002 ProQuest Info&Learning
File 484:Periodical Abs Plustext 1986-2002/May W3
(c) 2002 ProQuest
File 553:Wilson Bus. Abs. FullText 1982-2002/May
(c) 2002 The HW Wilson Co
File 624:McGraw-Hill Publications 1985-2002/May 17
(c) 2002 McGraw-Hill Co. Inc
File 275:Gale Group Computer DB(TM) 1983-2002/May 17
(c) 2002 The Gale Group
File 570:Gale Group MARS(R) 1984-2002/May 17
(c) 2002 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2002/May 15
(c) 2002 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2002/May 17
(c) 2002 The Gale Group
File 623:Business Week 1985-2002/May 17
(c) 2002 The McGraw-Hill Companies Inc
File 16:Gale Group PROMT(R) 1990-2002/May 17
(c) 2002 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 47:Gale Group Magazine DB(TM) 1959-2002/May 20
(c) 2002 The Gale group
File 80:TGG Aerospace/Def.Mkts(R) 1986-2002/May 17
(c) 2002 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2002/May 20
(c)2002 The Gale Group
File 634:San Jose Mercury Jun 1985-2002/May 18
(c) 2002 San Jose Mercury News
File 635:Business Dateline(R) 1985-2002/May 18
(c) 2002 ProQuest Info&Learning
File 647:CMP Computer Fulltext 1988-2002/May W2
(c) 2002 CMP Media, LLC
File 674:Computer News Fulltext 1989-2002/May W1
(c) 2002 IDG Communications
File 810:Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc

Set	Items	Description
S1	320253	DIS??? (3N) DRIVE?
S2	33327	S1 (3N) (TWO OR 2)
S3	29418	S1 (3N) (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	4019022	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	3806791	OCCUP? OR SITTING OR INSTALL?
S6	60280	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S7	488417	MODULAR? OR INTERCHANG?
S8	150038	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S9	7484	S1 (S) (TWIGGY OR THIN OR SKINNY OR NARROW?)
S10	291123	(LISA? OR APPLE) (3N) COMPUTER?
S11	0	AU=(COFFIN P?OR COFFIN, P? OR SCHMIDTKE G ? OR SCHMIDTKE, - G? OR LUFFEL R? OR LUFFEL?, R?)
S12	0	(S2 OR S3) (S) S4 (S) S5 (S) S6
S13	0	S1 (3N) S4 (S) S7 (S) S5 (S) S6
S14	28	S9 (5N) S10
S15	28	S14 NOT PY=>2000
S16	21	RD S15 (unique items)
S17	115	S4 (S) S9 (S) S5
S18	13	S17 (S) SONY
S19	2	S18 NOT PY=>2000
S20	2	RD S19 (unique items)
S21	69	LISA? (S) TWIGGY?
S22	10	S21 (S) SONY
S23	10	S22 NOT (S14 OR S17)

S24

6 RD S23 (unique items)

16/3,K/1 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
(c) 2002 Resp. DB Svcs. All rts. reserv.

01332627

Paths diverge on data-storage quest

(While PCs usually come with a hard-disk and floppy-disk drive, compact disk read-only memory drives, CD-ROMs, have recently become the standard)

Nikkei Weekly, v 33, n 1697, p 8
November 13, 1995
DOCUMENT TYPE: Journal (Japan)
LANGUAGE: English RECORD TYPE: Abstract

ABSTRACT:

...is able to store as many as 640 megabytes of data on a disk, while **Apple Computer** Inc offers a drive **thin** enough to fit in a notebook computer. The PD, or Phase-change dual Disk, is...

16/3,K/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01462973 SUPPLIER NUMBER: 11652050 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Apple settles two securities lawsuits. (Apple Computer Inc.)

Stokell, Ian
Newsbytes, NEW12200011
Dec 20, 1991

LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 388 LINE COUNT: 00030

... alleged that Apple and some of its officers did not make accurate disclosures concerning the **Lisa computer**, and a proprietary **disk drive** known as Twiggy.

In 1989 all claims except those relating to the disk drive were...

16/3,K/3 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01449557 SUPPLIER NUMBER: 11271223 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Decision overturned in Twiggy case; ruling demonstrates lack of 'evil intent.' (federal judge sets aside \$100 million verdict in securities-fraud case against two former Apple executives) (Business Watch)

Tomlinson, Shawn
MacWEEK, v5, n31, p83(1)
Sept 17, 1991

ISSN: 0892-8118 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 473 LINE COUNT: 00037

... and another, former executive of securities fraud.

The case stems from the marketing of the **Twiggy floppy disk drives** for the **Lisa computer** in 1982 and '83. A.C. (Mike) Markkula, currently vice chairman of Apple's board...

16/3,K/4 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01397311 SUPPLIER NUMBER: 10778794

Former Apple execs lose suit: millions awarded to investors misled about disk drive.

Wolf, Ron

San Jose Mercury News, p1A(2)

May 31, 1991

ISSN: 0747-2099

LANGUAGE: ENGLISH

RECORD TYPE: ABSTRACT

ABSTRACT: Investors in **Apple Computer** 's ill fated **Lisa computer** and **Twiggy disk drive** have been awarded damages that could surpass \$30 million by a federal judge. The jury...

...which led to the losses suffered by the company's stockholders. The failure of the **disk drives** and **computer** contributed to **Apple** 's shares falling from \$31 to less than \$9. Steve Jobs and John Couch, along ...

16/3,K/5 (Item 4 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01362351 SUPPLIER NUMBER: 08625768 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Supreme Court refuses to hear Apple shareholders' appeal. (disgruntled

Apple Computer Inc shareholders) (Business Briefs)

MacWEEK, v4, n25, p113(1)

July 10, 1990

ISSN: 0892-8118

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 168

LINE COUNT: 00013

... plunged 75 percent in 1983.

The suit focused on upbeat statements Apple made about the **Lisa computer** and accompanying **Twiggy disk drive** before their ill-fated 1983 debut. In September 1989, the 9th U.S. Circuit Court...

16/3,K/6 (Item 5 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01359524 SUPPLIER NUMBER: 08566172 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Minigrams.

Computergram International, n1449, CGI06190014

June 19, 1990

ISSN: 0268-716X

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 2033

LINE COUNT: 00172

... directors engaged in fraud by making 16 misleading statements about the sales prospects for the **Lisa computer** and companion **Twiggy disk drive**; in 1987, a federal judge dismissed the class action without a trial, finding no evidence...

16/3,K/7 (Item 6 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01315629 SUPPLIER NUMBER: 07738576 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Apple shareholders can sue over Twiggy . (Apple Computer Inc., high-density disk drive)

Woods, Wendy

Newsbytes, NEW10030052

Oct 3, 1989

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 198

LINE COUNT: 00015

Apple shareholders can sue over Twiggy . (Apple Computer Inc., high-density disk drive)

16/3,K/8 (Item 1 from file: 636)

DIALOG(R)File 636:Gale Group Newsletter DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01659318 Supplier Number: 42608000 (USE FORMAT 7 FOR FULLTEXT)

Apple Settles Two Securities Lawuits 12/20/91

Newsbytes, pN/A

Dec 20, 1991

Language: English Record Type: Fulltext

Document Type: Newswire; General Trade

Word Count: 364

... alleged that Apple and some of its officers did not make accurate disclosures concerning the **Lisa computer**, and a proprietary **disk drive** known as Twiggy.

In 1989 all claims except those relating to the disk drive were...

16/3,K/9 (Item 2 from file: 636)

DIALOG(R)File 636:Gale Group Newsletter DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01595314 Supplier Number: 42407304 (USE FORMAT 7 FOR FULLTEXT)

JUDGE OVERTURNS APPLE SECURITIES' CONVICTIONS IN DISK DRIVE CASE:

Technical Computing, v6, n11, pN/A

Oct, 1991

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 297

... At issue was the fact Apple announced in 1982 that it would produce the Twiggy **disk drive** for use in its **Apple 3 personal computer**, then later used the component in its Lisa computer. Apple then announced in 1983 that...

16/3,K/10 (Item 3 from file: 636)

DIALOG(R)File 636:Gale Group Newsletter DB(TM)

(c) 2002 The Gale Group. All rts. reserv.

01274539 Supplier Number: 41395219 (USE FORMAT 7 FOR FULLTEXT)

US SUPREME COURT RULES AGAINST DISGRUNTLED SHAREHOLDERS OF APPLE

Computergram International, n1449, pN/A

June 19, 1990

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 227

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...directors engaged in fraud by making 16 misleading statements about the sales prospects for the **Lisa computer** and companion **Twiggy disk drive**; in 1987, a federal judge dismissed the class action without a trial, finding no evidence...

16/3,K/11 (Item 1 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2002 The Gale Group. All rts. reserv.

02061018 Supplier Number: 42663249 (USE FORMAT 7 FOR FULLTEXT)

Settling Suits

Electronic News (1991), p29

Jan 13, 1992

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 165

... and Sept. 23, 1983, alleging that the company did not make accurate disclosures concerning the **Lisa computer**, a proprietary **disk drive**

known as Twiggy, and certain other matters. A fund of \$16 million has been set...

16/3,K/12 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

01704096 Supplier Number: 42125230
Apple Verdict Stuns Lawyers
San Francisco Chronicle (CA), pB1
June 1, 1991
Language: English Record Type: Abstract
Document Type: Newspaper; Trade

ABSTRACT:

...securities fraud. Apple had in 11/82 announced it would introduced a disk drive called Twiggy for its now-defunct **Lisa computer**, but in 9/83, said it would drop the Twiggy drive and leave the peripherals...

16/3,K/13 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.

01703612 Supplier Number: 42124390
Jury Backs Investors in Apple Suit
The New York Times, p19
June 1, 1991
Language: English Record Type: Abstract
Document Type: Newspaper; General

ABSTRACT:

...9/shr from \$31/shr. Investors lost millions after extensive technical problems with the 'Twiggy' **disk drive** resulted in the failure of **Apple's Lisa computer**, which depended on the drive. The 2 former officers were judged guilty of misleading investors...

...disclose the extent of the problems Apple encountered when it was trying to develop the **disk drive**. The **Lisa computer** flopped and the ~~Twiggy disk drive never even reached the market~~. Costs of the damages could reach \$30-40 mil, according...

16/3,K/14 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

05552756 SUPPLIER NUMBER: 11765391 (USE FORMAT 7 OR 9 FOR FULL TEXT)
In changing times, corporate disclosure policies require review. (Apple Computer Inc. securities fraud case shows flaws in securities disclosure law)
Placenti, Frank M.
Business Journal - Serving Phoenix & the Valley of the Sun, v12, n2, p28(1)
Nov 18, 1991
ISSN: 0895-1632 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 709 LINE COUNT: 00057

TEXT:

...a decade the Apple Computer Co. securities fraud litigation involving the 1983 introduction of the **Lisa computer** and **Twiggy disc drive**.

16/3,K/15 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

05532572 SUPPLIER NUMBER: 11642856 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**APPLE COMPUTER INC. ANNOUNCES AGREEMENT IN PRINCIPLE TO SETTLE TWO
SECURITIES CLASS ACTION LAWSUITS**
PR Newswire, 1220A4220
Dec 20, 1991
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 499 LINE COUNT: 00040

... officers and directors. Plaintiffs alleged that the company did not make accurate disclosures concerning the **Lisa computer**, a proprietary **disk drive** known as Twiggy, and certain other matters. In 1989 all claims except those relating to...

16/3,K/16 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

05164559 SUPPLIER NUMBER: 10743066 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Here's the skinny on the 7-year-old 'Twiggy' suit: a shareholder lawsuit, filed over Apple drive, finally gets under way. (includes articles on possible Apple layoffs; decline in world market for chip production equipment; Hewlett-Packard/Lotus Development Corp.'s hand-held computer; financial status of Radius Inc. and Rasterops Corp.; Touch Communications layoffs) (Technology Roundup)
Goldman, James S.; Swartz, Jon
Business Journal, v9, n3, p9(1)
May 6, 1991
ISSN: 1048-8812 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 969 LINE COUNT: 00075

... directors engaged in securities fraud when discussing sales prospects for the company's ill-fated **Lisa computer** and a **disk drive** code named "Twiggy" that was designed for the Lisa. The innovative but overpriced Lisa sold...

16/3,K/17 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

03967845 SUPPLIER NUMBER: 07960137
Apple loses court appeal. (Apple Computer Inc., charges of fraud in connection with promotion of Lisa computer and Twiggy disk drive)
New York Times, v139, Wed ed, col 6, pC7(N) pD6(L)
Sept 27, 1989
CODEN: NYTIA ISSN: 0362-4331 LANGUAGE: ENGLISH RECORD TYPE:
CITATION

Apple loses court appeal. (Apple Computer Inc., charges of fraud in connection with promotion of Lisa computer and Twiggy disk drive)

16/3,K/18 (Item 1 from file: 634)
DIALOG(R)File 634:San Jose Mercury
(c) 2002 San Jose Mercury News. All rts. reserv.

06251109
JUDGE EXONERATES EX-APPLE EXECS NEW TRIAL ORDERED FOR COMPANY
San Jose Mercury News (SJ) - Saturday, September 7, 1991
By: RON WOLF, Mercury News Staff Writer
Edition: Morning Final Section: Business Page: 10E
Word Count: 538

... in 1983 when the value of Apple shares plunged 70 percent after the company's **Lisa computer** flopped. The Twiggy **disk drive** was intended

for use in the Lisa, but Apple abandoned the troubled project and built...

16/3,K/19 (Item 2 from file: 634)
DIALOG(R)File 634:San Jose Mercury
(c) 2002 San Jose Mercury News. All rts. reserv.

06152115

**FORMER APPLE EXECS LOSE SUIT MILLIONS AWARDED TO INVESTORS MISLED ABOUT
DISK DRIVE**

San Jose Mercury News (SJ) - Friday May 31, 1991
By: RON WOLF, Mercury News Staff Writer
Edition: Morning Final Section: Front Page: 1A
Word Count: 695

... in 1983 when the value of Apple shares plunged 70 percent after the company's **Lisa computer** flopped. The **disk drive**, code-named "Twiggy," was intended for use in the Lisa, but Apple abandoned the troubled...

... was still chairman of Apple when the company experienced most of its problems with the **Lisa computer** and the Twiggy **disk drive**. Markkula was president and chief executive officer at the time.

Apple will appeal the verdict...

... complaint, filed in 1984, alleged that Apple and its executives misled investors about both the **Lisa computer** and the Twiggy **disk drive**. In 1987, a federal judge dismissed the entire case without a trial, finding no evidence...

16/3,K/20 (Item 3 from file: 634)
DIALOG(R)File 634:San Jose Mercury
(c) 2002 San Jose Mercury News. All rts. reserv.

06114171

1983 STOCK DROP FINALLY LANDS APPLE IN COURT

San Jose Mercury News (SJ) - Tuesday April 23, 1991
By: RON WOLF, Mercury News Staff Writer
Edition: Morning Final Section: Business Page: 3C
Word Count: 333

TEXT:

...Apple officials made misleading statements about the sales prospects for the company's ill-fated **Lisa computer** and a **disk drive** with the code name "Twiggy," intended for use with the Lisa. The innovative but over-priced **Lisa computer** sold poorly, and the **Twiggy drive**, plagued by technical problems, never reached the market.

16/3,K/21 (Item 4 from file: 634)
DIALOG(R)File 634:San Jose Mercury
(c) 2002 San Jose Mercury News. All rts. reserv.

05670175

APPLE RULING TO STAND COURT REFUSES TO HEAR SHAREHOLDER LAWSUIT

SAN JOSE MERCURY NEWS (SJ) - Monday, June 18, 1990
By: Mercury News Wire Services
Edition: Stock Final Section: Business Page: 12D
Word Count: 379

TEXT:

... directors engaged in fraud by making 16 misleading statements about the sales prospects for the **Lisa computer** and companion **Twiggy disk drive**.

?

20/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

01592431 02-43420

At 200MB the floppy gets a new lease on life

Peters, Dirk

Computer Technology Review v18n2 PP: 56 Feb 1998

ISSN: 0278-9647 JRNL CODE: CTN

WORD COUNT: 714

...TEXT: the media) is significantly avoided

Read And Write Compatibility With 3.5-inch Floppy Disks

Sony estimates that, in 1996, about 70 million floppy **disk drives** were sold worldwide and in 1997, **Sony** expects that more than 3 billion floppy diskettes were sold. With the huge **installed** base of floppy drives and media in the market, any product trying to **replace** the floppy **disk drive** needs to offer read and write compatibility with the 3.5-inch floppy standard. HiFD's dual discrete head has both a **narrow** gap for reading and writing the 200MB HiFD media, and a wide gap for reading...

20/3,K/2 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2002 The Gale Group. All rts. reserv.

06471356 SUPPLIER NUMBER: 13908417 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Cooperation, collaboration, and coalition: a perspective on the types and purposes of technology joint ventures. (Symposium: Joint Ventures, Including Strategic Alliances, to Develop Computer Technology)

Compton, Charles T.C.

Antitrust Law Journal, 61, n3, 861-897

Spring, 1993

ISSN: 0003-6056

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 8220 LINE COUNT: 00677

... Patent Licensing Deal, San Jose Mercury News, July 14, 1992, at 2F. (21) Jonathan Weisman, **Dish Drive** Deal Would Curb Litigation, San Jose Bus. J., July 20, 1992, at 1. (22) Certainly...

...Personal Digital Assistant, MacWorld, July 1992, at 125. In February 1993, Apple teamed up with **Sony** and 5 other partners in General Magic Corporation to develop standards for personal communicators. Six...

...and a subsidiary of China Electronics Corp. have formed a company in Shenzhen to manufacture **disk drives** for China-based OEM computer makers. See Conner Forms Venture in China, Elec. News, Sept...

...OSF's one acknowledged success is the "Motif" graphical user interface software, which has been **installed** on more than 500,000 systems since its introduction in 1989. Id. OSF is registered...s assets or controlling interest in another firm's stock. Alliances need not involve equity **swaps** or equity investments, although they often do. Strategic alliances without equity typically consist of contracts...caused (or reflected) a significant change in the ACE alliance, recasting "the group as a **narrow** coalition around MIPS Computer's RISC architecture, in contrast to the ambitious effort to set...

24/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

00804758 94-54150

Macintosh innovations

Gruman, Galen; Heid, Jim
Macworld v11n2 PP: 86-98 Feb 1994
ISSN: 0741-8647 JRNL CODE: MAW
WORD COUNT: 6745

...TEXT: t happen: the first Mac prototype that Apple showed Macworld in late 1983 used the **Lisa** 's 5-1/4-inch **Twiggy** floppies. Ultimately, the 3-1/2-inch disk was adopted because " **Twiggy** didn't work," says SuperMac's Crow. He recalls the herculean effort to get the...

... Mac ROM's floppy storage expectations of 400K (an amount based on a single-sided **Twiggy** disk's capabilities). **Sony** 's 3-1/2-inch drives were designed to hold 256K, and Apple engineers eventually...

24/3,K/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02527252 SUPPLIER NUMBER: 77014390 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The Ugly, the Dumb and the Just Plain Bad. (MSX, Intel iAPX432 microprocessor, Apple Newton) (Product Information)
Dvorak, John C.
PC Magazine, 193
Sept 4, 2001
ISSN: 0888-8507 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 850 LINE COUNT: 00064

... formats, created in the hope of superseding the 5.25-inch floppy disk (which the **Sony** 3.5- inch format finally did). Included in this crowd were the Apple **Lisa** " **Twiggy** " drive, the Amdek 3-inch hard-case diskette, and the Dysan/Tabor floppy flop.
Audrey...

24/3,K/3 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02248899 SUPPLIER NUMBER: 53342783 (USE FORMAT 7 OR 9 FOR FULL TEXT)
What Ever Happened to... Lisa?(Humor) (Editorial)
Dvorak, John C.
Computer Shopper, 434(1)
Jan, 1999
DOCUMENT TYPE: Editorial ISSN: 0886-0556 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 849 LINE COUNT: 00065

... years."
By January of 1984, with the Macintosh about to be introduced, the company gave **Lisa** 1 owners a free upgrade to the **Lisa** 2 and announced the **Lisa** 2/5 and **Lisa** 2/10. The 2/5 had a 5MB hard drive and the 2/10 a whopping 10MB hard drive (the Widget). The **Twiggy** drive was dropped for a 3.5-inch **Sony** . Still, few **Lisas** sold. It was estimated that Apple, which began development in 1979, spent \$50 million on the **Lisa** . Luckily, much of the development was rolled into the Macintosh design.
A year later, the...

24/3,K/4 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01439152 SUPPLIER NUMBER: 10834842 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Apple memos swayed Twiggy jury to convict. (poor-quality disk drives used in Apple Lisa)
Brown, Dartanyan
MacWEEK, v5, n22, p91(2)
June 11, 1991
ISSN: 0892-8118 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 470 LINE COUNT: 00037

ABSTRACT: Internal Apple memos indicating that the ' **Twiggy** ' floppy disk drives used in the Apple **Lisa** microcomputer had a very high failure rate may have led to the conviction of executives...

...Apple shareholders brought the suit in 1984, claiming that Apple's decision to drop the **Twiggy** drive and adopt **Sony** 's 3.5-inch drive for the **Lisa** constituted fraud. Makkula and Vennard allegedly hid the facts about the **Twiggy** 's poor reliability in order to build up investor confidence. The company's stock dropped 25 percent after it announced the death of the **Twiggy** drive, and Apple was unable to convince the jury that this could be explained by...

24/3,K/5 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01431310 SUPPLIER NUMBER: 10787764 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Minigrams.
Computergram International, n1689, CGI06040019
June 4, 1991
ISSN: 0268-716X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 2546 LINE COUNT: 00213

... John Vennard (CI No 1,685) is that Markkula and Vennard previewed the high capacity **Twiggy** floppy disk drive at Comdex/Fall in 1982, saying that the drive ensured "greater integrity...

...problems with the drive; the drive was delivered the following year with the ill-fated **Lisa** computer but was soon replaced with 3.5" floppy drives from **Sony** Corp; Apple saw its share price plunge \$8, almost 25% when it accompanied weak figures...

24/3,K/6 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01507440 Supplier Number: 42132172 (USE FORMAT 7 FOR FULLTEXT)
BACKGROUND TO THE APPLE RULING
Computergram International, n1686, pN/A
June 4, 1991
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 136

(USE FORMAT 7 FOR FULLTEXT)
TEXT:

...John Vennard (CI No 1,685) is that Markkula and Vennard previewed the high capacity **Twiggy** floppy disk drive at Comdex/Fall in 1982, saying that the drive ensured "greater integrity...

...problems with the drive; the drive was delivered the following year with the ill-fated **Lisa** computer but was soon replaced with 3.5" floppy drives from **Sony** Corp; Apple saw its share price plunge \$8, almost 25% when it accompanied weak figures...

?

File 344:Chinese Patents Abs Aug 1985-2004/May
(c) 2004 European Patent Office
File 347:JAPIO Nov 1976-2004/Feb(Updated 040607)
(c) 2004 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2004/Jun W03
(c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040624,UT=20040617
(c) 2004 WIPO/Univentio
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200441
(c) 2004 Thomson Derwent

Set	Items	Description
S1	377	(REMOV? OR DETACH?) (3N) (DUAL OR TWO) (3N) DRIVE?
S2	0	S1(5N) (COMBO OR COMBINATION)
S3	2	S1(S) (COMBO OR COMBINATION)
S4	0	S3 NOT (CASTING()) MACHINE OR RAILWAY)
S5	25	S1 AND (MEGABYTES OR MB)
S6	1	S5 AND AD=19991231:20040702/PR
S7	24	S5 NOT S6
S8	1	S7 AND TEAC
S9	594046	IC=G11B?
S10	2	S7 AND S9

8/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00683629

Hot-swappable multi-cartridge docking module.

Ankoppelmodul fur austauschbaren Speicher.

Module d'accouplement pour memoires échangeables.

PATENT ASSIGNEE:

TEAC CORPORATION, (598570), 3-7-3, Naka-cho, Musashino-shi Tokyo, (JP),
(applicant designated states: DE;GB)

Pont Peripherals Corporation, (1867590), 912 West Maude Avenue,
Sunnyvale, California 94086, (US), (applicant designated states: DE;GB

INVENTOR:

Kaczeus, Steven L., 1319 Chandon Court,, San Jose California 95125, (US)

McKnight, Thomas, 15860B Winchester Boulevard, Los Gatos California 95030
, (US)

Edwards, Roy J., 215 Montclair Road, Los Gatos California 95030, (US)

LEGAL REPRESENTATIVE:

Cross, Rupert Edward Blount et al (42891), BOULT, WADE & TENNANT 27
Furnival Street, London EC4A 1PQ, (GB)

PATENT (CC, No, Kind, Date): EP 653759 A2 950517 (Basic)
EP 653759 A3 960313

APPLICATION (CC, No, Date): EP 94308357 941111;

PRIORITY (CC, No, Date): US 152207 931115

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G11B-033/12; G06F-013/40;

ABSTRACT WORD COUNT: 73

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	EPAB95	217
----------	-----------	--------	-----

SPEC A	(English)	EPAB95	3770
--------	-----------	--------	------

Total word count - document A	3987
-------------------------------	------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	3987
------------------------------------	------

PATENT ASSIGNEE:

TEAC CORPORATION...

...SPECIFICATION systems or personal computers, typical requirements for mass storage devices are in the hundreds of **megabytes** to several gigabytes. In conjunction with such mass storage requirements are the data security issues...

...with permanently installed drives is that the capacity is limited to a specific number of **megabytes** . Even if a large capacity is initially provided, a truism in the industry is that...for clarity.

Referring next to Figure 8, a docking module 400 capable of holding ten **removable** disk **drives** 50 at a density of **two** drives per half-height bay is shown in side elevational view with certain elements revealed...

...CLAIMS depth of 5.75 inches, and a nominal height of one-half inch;
at least **two** doors for insertion of **removable** disk **drives** ;
and
connection means for connecting the disk drives to a host system. ...

?

10/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

00683629

Hot-swappable multi-cartridge docking module.

Ankoppelmodul fur austauschbaren Speicher.

Module d'accouplement pour memoires échangeables.

PATENT ASSIGNEE:

TEAC CORPORATION, (598570), 3-7-3, Naka-cho, Musashino-shi Tokyo, (JP),
(applicant designated states: DE;GB)

Pont Peripherals Corporation, (1867590), 912 West Maude Avenue,
Sunnyvale, California 94086, (US), (applicant designated states: DE;GB)

INVENTOR:

Kaczeus, Steven L., 1319 Chandon Court,, San Jose California 95125, (US)

McKnight, Thomas, 15860B Winchester Boulevard, Los Gatos California 95030
, (US)

Edwards, Roy J., 215 Montclair Road, Los Gatos California 95030, (US)

LEGAL REPRESENTATIVE:

Cross, Rupert Edward Blount et al (42891), BOULT, WADE & TENNANT 27
Furnival Street, London EC4A 1PQ, (GB)

PATENT (CC, No, Kind, Date): EP 653759 A2 950517 (Basic)
EP 653759 A3 960313

APPLICATION (CC, No, Date): EP 94308357 941111;

PRIORITY (CC, No, Date): US 152207 931115

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G11B-033/12 ; G06F-013/40

ABSTRACT WORD COUNT: 73

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	217
SPEC A	(English)	EPAB95	3770
Total word count - document A			3987
Total word count - document B			0
Total word count - documents A + B			3987

INTERNATIONAL PATENT CLASS: G11B-033/12 ...

...SPECIFICATION systems or personal computers, typical requirements for mass storage devices are in the hundreds of **megabytes** to several gigabytes. In conjunction with such mass storage requirements are the data security issues...

...with permanently installed drives is that the capacity is limited to a specific number of **megabytes** . Even if a large capacity is initially provided, a truism in the industry is that...for clarity.

Referring next to Figure 8, a docking module 400 capable of holding ten **removable** disk **drives** 50 at a density of **two** drives per half-height bay is shown in side elevational view with certain elements revealed...

...CLAIMS depth of 5.75 inches, and a nominal height of one-half inch;
at least **two** doors for insertion of **removable** disk **drives** ;
and
connection means for connecting the disk drives to a host system. ...

10/3,K/2 (Item 1 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

00263708 **Image available**

MINIATURE HARD DISK DRIVE SYSTEM
SYSTEME MINIATURE DE COMMANDE DE DISQUE DUR

Patent Applicant/Assignee:

CALLUNA TECHNOLOGY LIMITED,
WHITE Norman Jackson,
CAITHNESS Michael Gordon,
URQUHART Roderick Munro,
STEWART Alec Donald,

Inventor(s):

WHITE Norman Jackson,
CAITHNESS Michael Gordon,
URQUHART Roderick Munro,
STEWART Alec Donald,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9411877 A1 19940526
Application: WO 93GB2366 19931117 (PCT/WO GB9302366)
Priority Application: GB 9224176 19921118

Designated States: AT AU BB BG BR BY CA CH CZ DE DK ES FI GB HU JP KP KR KZ
LK LU LV MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US UZ VN AT BE CH DE
DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN
TD TG

Publication Language: English

Fulltext Word Count: 11164

Main International Patent Class: **G11B-025/04**

International Patent Class: **G11B-33:12**

Fulltext Availability:

Detailed Description
Claims

Detailed Description

... comparable to those on a typical 2,5 inch
disk drive, say greater than 60 MB (Megabytes), Semicon
ductor memory cards, such as 'Flash' cards, meet certain
of these requirements but critically...invention is to provide a
miniature hard disk drive that can store at least 40 MB
of formatted data per disk, I
15 A fifth object of the present invention is...data transfer rates,
access times, error rate
35performance, and storage capacities of up to 60 MB or
more, preferably at least 80MB, advantageously around
120MB or more, can be achieved in...usable area on a 48mm diameter disk
it is
therefore possible to store around 40 MB of formatted
data on each such disk. In order to meet the general
data storage requirement of 60 MB minimum, two 48 mm
disks are fitted within the HDA, These are supported on
the...namely : data channel IC, motor speed control IC,
microprocessor, interface IC (one for a fixed drive or
two for a removable drive), RAM, ROM and a custom
designed ASIC (Application Specific Integrated Circuit).

With the exception of...used to realise the
storage capability and performance of the drive, The
achievement of 85 MB of capacity is basically dependent

25 on the magnetic characteristics of the heads and disks...The resulting optimised areal density of 126 Mbits per square inch (maximum) enables 85,33 **MB** of formatted storage capacity to be achieved in a two disk configuration. The general principles...

Claim

... 14

wherein the usable storage capacity per miniature hard disk is not less than 40 **Megabytes** .

16 A miniature disk drive s
ystem comprising: a
substantially sealed enclosure housing a head...

?

File 2:INSPEC 1969-2004/Jun W3
(c) 2004 Institution of Electrical Engineers
File 6:NTIS 1964-2004/Jun W4
(c) 2004 NTIS, Intl Cpyrght All Rights Res
File 8:Ei Compendex(R) 1970-2004/Jun W3
(c) 2004 Elsevier Eng. Info. Inc.
File 34:SciSearch(R) Cited Ref Sci 1990-2004/Jun W4
(c) 2004 Inst for Sci Info
File 35:Dissertation Abs Online 1861-2004/May
(c) 2004 ProQuest Info&Learning
File 65:Inside Conferences 1993-2004/Jun W4
(c) 2004 BLDSC all rts. reserv.
File 94:JICST-EPlus 1985-2004/Jun W1
(c)2004 Japan Science and Tech Corp(JST)
File 95:TEME-Technology & Management 1989-2004/Jun W1
(c) 2004 FIZ TECHNIK
File 99:Wilson Appl. Sci & Tech Abs 1983-2004/Jun
(c) 2004 The HW Wilson Co.
File 144:Pascal 1973-2004/Jun W3
(c) 2004 INIST/CNRS
File 233:Internet & Personal Comp. Abs. 1981-2003/Sep
(c) 2003 EBSCO Pub.
File 239:Mathsci 1940-2004/Aug
(c) 2004 American Mathematical Society
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
(c) 2002 The Gale Group
File 603:Newspaper Abstracts 1984-1988
(c)2001 ProQuest Info&Learning
File 483:Newspaper Abs Daily 1986-2004/Jun 24
(c) 2004 ProQuest Info&Learning

Set	Items	Description
S1	576	(REMOV? OR DETACH?) AND (DUAL OR TWO) (3N) DRIVE?
S2	161	S1 AND PY=2000:2004
S3	415	S1 NOT S2
S4	14	S3 AND (COMBO OR COMBINATION)
S5	12	RD S4 (unique items)
S6	19	S3 AND (MB OR MEGABYTES)
S7	18	S6 NOT S4
S8	18	RD S7 (unique items)
S9	1	S3 AND TEAC

5/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6234146 INSPEC Abstract Number: B1999-06-6135-054, C1999-06-5260B-079

Title: Image segmentation with scatter-partitioning RBF networks: a feasibility study

Author(s): Baraldi, A.

Author Affiliation: Int. Comput. Sci. Inst., Berkeley, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)
vol.3455 p.12-22

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3455L:12:ISWS;1-F

Material Identity Number: C574-1998-285

U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00

Conference Title: Applications and Science of Neural Networks, Fuzzy Systems, and Evolutionary Computation

Conference Sponsor: SPIE

Conference Date: 20-22 July 1998 Conference Location: San Diego, CA, USA

Language: English

Subfile: B C

Copyright 1999, IEE

...Abstract: SGNG employs a one-stage error-driven learning strategy and is capable of generating and **removing** both hidden units and synaptic connections. A slightly modified SGNG version is tested as a...

... weights simultaneously but consistently. As a possible remedy, in the framework of RBF networks the **combination** of a **two**-stage error- **driven** learning strategy with synapse generation and **removal** criteria should be further investigated.

5/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

03308207 INSPEC Abstract Number: B89015450

Title: Deep hole plating

Author(s): Murray, J.

Journal: Circuits Manufacturing vol.28, no.9 p.41, 44-5

Publication Date: Sept. 1988 Country of Publication: USA

CODEN: CMFGAF ISSN: 0009-7306

Language: English

Subfile: B

...Abstract: of deep hole plating uses ultrasonics in desmearing and subsequent rinse steps. The cavitation helps **remove** drilling chaff and etch-back residues, leaving the holes more receptive to plating. Chemcut's Uniplate process employs a **combination** of ultrasonics and flood bars for getting into the holes. Chemcut's cavitation is **driven** by transducers with **two** different frequencies. Voert in Austria and several other European PCB makers use variations of the...

5/3,K/3 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

1301788 NTIS Accession Number: DE87005387

Off-Gas System Data Summary for the Ninth Run of the Large Slurry Fed Melter

Colven, W. P.

Du Pont de Nemours (E.I.) and Co., Aiken, SC. Savannah River Lab.

Corp. Source Codes: 009966002; 2204000

Sponsor: Department of Energy, Washington, DC.

Report No.: DPST-83-809

8 Sep 83 54p

Languages: English

Journal Announcement: GRAI8715; NSA0000

Portions of this document are illegible in microfiche products. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

... wet scrubbing by outperforming all other scrubbers tested at the Equipment Test Facility (ETF). The **two** stage, steam- **driven** scrubber achieved consistent decontamination factors for cesium exceeding the required DWPF flowsheet DF of 50...

... off-gas line. In addition, a rotating wire brush cleaning device provided easy and efficient **removal** of deposits which had accumulated. The **combination** of the two has adequately resolved the deposit accumulation problem and both devices have been...

5/3,K/4 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

1290154 NTIS Accession Number: DE87002844

Modified Hazard Ranking System/Hazard Ranking System for Sites with Mixed Radioactive and Hazardous Wastes: Software Documentation

Stenner, R. D. ; Peloquin, R. A. ; Hawley, K. A.

Battelle Pacific Northwest Labs., Richland, WA.

Corp. Source Codes: 048335000; 9512268

Sponsor: Department of Energy, Washington, DC.

Report No.: PNL-6066

Nov 86 365p

Languages: English

Journal Announcement: GRAI8711; NSA1200

Portions of this document are illegible in microfiche products. Original copy available until stock is exhausted. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A16/MF A01

...I Modified Hazard Ranking System or Hazard Ranking System evaluations. The program is designed to **remove** the tedium and potential for error associated with the performing of hand calculations and the...

... microcomputer (IBM PC, PC/XT, or PC/AT, or a compatible system) using either a **dual** floppy disk **drive** or a hard disk storage system. It is written in the dBASE III language and...

...by DOE/PNL, the hazard ranking system methodology developed by EPA/MITRE Corp., or a **combination** of the two. This document is a companion manual to the mHRS/HRS user manual...

5/3,K/5 (Item 3 from file: 6)

DIALOG(R) File 6:NTIS

(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

0565049 NTIS Accession Number: N76-25538/9/XAB

Development of a Drive System for a Sequential Space Camera

(Final Report)

Sharpsteen, J. T. ; Solheim, C. D. ; Stoap, L. J.

Perkin-Elmer Corp., Pomona, Calif. Aerospace Div.

Report No.: NASA-CR-147759; SPO-30352-ADD

May 76 16p

Journal Announcement: GRAI7620; STAR1416

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A02/MF A01

Breadboard models of single and **dual** motor **drives** for the shutter, claw and magazine of a space camera system were designed and tested...

...resorting to a solenoid actuated clutch for pulse operation. Shutter speed is established by a **combination** of the cinemode speed and the opening of the conventional DAC two piece shutter. Pulse mode operation is obtained by applying power at a fixed clock rate and **removing** power at an appropriate point in the mechanical cycle such that the motor comes to...

5/3,K/6 (Item 1 from file: 8)

DIALOG(R) File 8:EI Compendex(R)

(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

01063113 E.I. Monthly No: EI8112102138 E.I. Yearly No: EI81066258

Title: WELLSITE LOG ANALYSIS USING A DESKTOP COMPUTER.

Author: Krygowski, Daniel A.; Wahlstedt, Warren J.; Colby, Robert L.

Corporate Source: Cities Serv Co, Denver, Colo

Source: Trans SPWLA Annu Logging Symp 21st, Lafayette, La, Jul 8-11 1980.

Publ by the Soc of Prof Well Log Anal (SPWLA), Houston, Tex, 1980 Sect Y, 14 p

Publication Year: 1980

CODEN: SPWLA6 ISSN: 0081-1718

Language: ENGLISH

Abstract: A van-mounted computer with **two** flexible disk **drives** and digitizer, is the basis for a wellsite log analysis system. The wide operating range...

...contained and operable in extremes of weather. In addition, the system's portability allows its **removal** from the van for office use. The two flexible disks are used to store system...

...data to supplement digitized logs is also possible. Well data can be analyzed by a **combination** of explicit equations and graphical techniques (cross-plots) with the results displayed in tabular or...

5/3,K/7 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01427571 ORDER NO: AADAA-I9525584
APPLICATIONS OF DUAL PULSED NEODYMIUM:YTTRIUM ALUMINUM GARNET LASER TO MATERIALS PROCESSING

Author: LEHANE, CHRISTOPHER J.
Degree: PH.D.
Year: 1995
Corporate Source/Institution: STATE UNIVERSITY OF NEW YORK AT BUFFALO (0656)
Source: VOLUME 56/04-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 2263. 185 PAGES

...systems were developed for applications in materials processing. The output of each consists of the **combination** of two free-running pulses; pulse 1 is a high energy, long duration pulse and...

...order to produce the dual pulse. A single head dual pulse laser was also constructed. **Two** separate flashlamp **drivers** were integrated together in order to produce the dual pulse.

The performance of both the...

...results.

The so called dual pulse method was used to enhance the efficiency of material **removal** during laser drilling. Pulse 1 is used to produce a large molten pool of liquid...

...the high intensity pulse 2 with the metal. The inherent improvement in efficiency through the **removal** of liquid allows for drilling at large laser-target standoff distances has been developed. A...

5/3,K/8 (Item 1 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00406219 95PJ12-004
Panasonic Power Drive2 -- 650MB removable storage in a quad-speed CD-ROM drive

Doolittle, Sean
PC Today , December 1, 1995 , v9 n12 p17, 1 Page(s)
ISSN: 1040-6484
Company Name: Panasonic
Product Name: Panasonic Power Drive2

Panasonic Power Drive2 -- 650MB removable storage in a quad-speed CD-ROM drive

Presents a mixed review of the Power Drive2 (\$995), a **combination** data-storage device and quad-speed CD-ROM drive from Panasonic (800, 201). Requires either...

... 0 or later, 640KB RAM, and an SCSI interface board. Reports that the external SCSI **drive** utilizes phase-change **dual** technology to record on a rewritable 650MB optical disk cartridge. Says that the software is...

5/3,K/9 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00321153 93PW08-031

CompuAdd Express 466DX2

Farrance, Rex; Riofrio, Melissa R
PC World , August 1, 1993 , v11 n8 p131, 134, 2 Page(s)
ISSN: 0737-8939
Company Name: CompuAdd Express
Product Name: CompuAdd Express 466DX2

...66MHz 486DX2-based system with 4MB RAM, 3 1/2 and 5 1/4 inch **combination** floppy drive, 256K secondary RAM cache, integrated local bus video, and a 160MB hard disk...

... reviewed. Expandability is good, as it has six free 16-bit slots and three free **drive** bays. **Two** other external **drive** bays contain a receptacle for an optional 60MB **removable** hard drive. The package includes the excellent Canon BJ-200 ink jet printer. Bundled software...

5/3,K/10 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00295204 92PW11-009

TEAC FD-505 -- Storage

Miller, Dan
PC World , November 1, 1992 , v10 n11 p114-115, 2 Page(s)
ISSN: 0737-8939
Company Name: TEAC America
Product Name: TEAC FD-505

Presents a favorable review of the TEAC FD-505 (\$249), a **combination** floppy drive from TEAC America Inc. (213). Features of the half-height unit include a...

... latter measuring no more than half an inch in thickness. Says that installation merely involves **removing** the old 5.25 drive, inserting the TEAC unit in its place, then labeling the **two** floppy **drives** A: and B: on the CMOS utility; though the two-in-one package costs more...

5/3,K/11 (Item 4 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00209201 90PI01-118

Acer 1100/SX

Brown, Bruce
PC Magazine , January 30, 1990 , v9 n2 p99-100, 2 Pages
ISSN: 0888-8507

... 408). The standard configuration includes 1MB RAM, 5 1/4 inch high-density floppy disk **drive** , one parallel and **two** serial ports, utilities, Microsoft Windows/386 2.1, DOS 3.3, and a mouse. It...

...has room for four 3 1/2 inch disk drives, all of which can use **removable** media. Says there is ``nothing particularly exciting about this

machine'' the **combination** of features and components, reasonable price, and the vendor's proven support and service policies...

5/3,K/12 (Item 5 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00200602 89IW09-142

NEC's Prospeed 386 offers portability in a dockable PC This desktop/portable PC features a 17-pound clamshell portable with a battery power option.

Wong, Eugene; McCarthy, Michael

InfoWorld , September 11, 1989 , v11 n37 p80-81, 2 Pages

ISSN: 0199-6649

Presents a favorable review of th NEC Prospeed 386 Modular PC (\$7,598), a **combination** desktop/portable computer from NEC Home Electronics Inc., Wood Dale, IL (800). The base configuration...

... one 16-bit expansion slot. The docking unit adds three AT slots, an XT slot, **two** half-height **drive** bays, a serial port, and an AC power supply. Says the computer costs more than...

... a portable, but provides many of the capabilities of both. Performance is good and the **detachable** black-and-white monitor provides a good display. The battery pack in the portable mode...

?

8/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

03803951 INSPEC Abstract Number: B91012663, C91010002

Title: The Asaca AAM-800: an MO disk-based digital audio storage system

Author(s): Streets, S.; Tugwell, D.

Journal: International Broadcast Engineer vol.21, no.240 p.68-9

Publication Date: Nov. 1990 Country of Publication: UK

CODEN: IBREBP ISSN: 0020-6229

Language: English

Subfile: B C

...Abstract: optical disc drives employ noncontact heads that enable the magneto-optical disc cartridge to be **removed** from the disc drive for large data storage capacities for random access of up to 350 **megabytes** of on line data. Asaca Corporation has incorporated these many advantages of magneto-optical technology into a **dual disc drive** audio file systems for digital recording and playback of high-quality audio in production studios...

...Identifiers: **dual disc drive** audio file systems

8/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

02958667 INSPEC Abstract Number: C87053622

Title: The ISI WC 525 optical disk drive

Author(s): Malloy, R.

Journal: BYTE vol.12, no.8 p.231-3

Publication Date: July 1987 Country of Publication: USA

CODEN: BYTEDJ ISSN: 0360-5280

Language: English

Subfile: C

...Abstract: drive uses a 5 1/4-inch optical disk that can store up to 115 **megabytes** on each of its two sides. You can attach the shoebox-size drive to any...

... available for \$2595. In addition, ISI reports that it sells a SCSI version with Unix **drivers** to OEMs. **Two** kinds of disks are available for the system. A single-sided disk (\$100) stores up to 115 **megabytes** ; a double-sided disk (\$125) can store another 115 **megabytes** on its other side. To access this second side, you must **remove** the disk from the drive, flip it over, and reinsert it.

8/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

02609194 INSPEC Abstract Number: D86000705

Title: The Harris/Lanier Concept III system

Author(s): Nofel, P.J.; Ordosch, L.L.

Journal: Modern Office Technology vol.30, no.12 p.78-83

Publication Date: Dec. 1985 Country of Publication: USA

CODEN: MOFTDB ISSN: 0026-8208

Language: English

Subfile: D

...Abstract: the Concept 1400 can be interconnected through the Concept 6000 fileserver. The 1200 unit has **dual floppy drives** and a green monitor with an 80-column by 26-line display. The 1400 unit...

... and an amber monitor. The 6000 also has a Winchester disk capable of storing 67 **megabytes** . The 1200 and 1400 have low-profile **detached** keyboards connected to the units via three-foot coiled cables that can be stretched quite...

...Identifiers: **dual floppy drives** ; ...

...low-profile **detached** keyboards

8/3,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

02338041 INSPEC Abstract Number: C84050083

Title: The Affinity 16 desktop microcomputer

Journal: Small Business Computer News vol.9, no.10 p.6-12

Publication Date: Oct. 1982 Country of Publication: USA

CODEN: SBCNDL ISSN: 0736-6957

Language: English

Subfile: C

...Abstract: Its features include: 128 kilobytes (Kb) of memory; two built-in 320 Kb floppy disc **drives** ; one or **two** add-on 5/10-megabyte (**Mb**) hard disc drives; 12-inch diagonal monochrome display; 93-key, **detachable** , typewriter-style keyboard; multitasking operating system; development tools and utilities; BASIC, COBOL and Macro Assembler...

8/3,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

02045608 INSPEC Abstract Number: C83019680

Title: Sanyo weighs in

Journal: Which Computer? p.29, 31

Publication Date: March 1983 Country of Publication: UK

CODEN: WHCOD8 ISSN: 0140-3435

Language: English

Subfile: C

...Abstract: the market but has superior features to its competitors. The minimum self-sufficient system has **two** integral **drives** , offering a total of 1.2 **MB** of disc storage, and comes with 128 KB of RAM as standard. The use of...

... to perform up to twice as fast as 8088-based rivals in some applications. The **detachable** keyboard contains, in addition to the normal QWERTY layout, a separate numeric keypad for fast...

8/3,K/6 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00246863 91MA08-007

Bernoulli 90 boosts capacity and reliability -- Cost per megabyte less than SyQuest

Coleman, Dale

MacWEEK , August 6, 1991 , v5 n27 p105, 108, 2 Page(s)

ISSN: 0892-8118

Company Name: Iomega; Syquest Technology

Product Name: Bernoulli Transportable 90; Mass Micro DataPak 88

Presents a favorable review of the Bernoulli Transportable 90 (\$1198), a **removable** -cartridge drive from Iomega Corp. of Roy, UT (801). Says the Bernoulli drive is very...

...as a primary storage device with its 19 ms average access time and 2.5 **MB** /s data transfer rate. However, documentation is poor, and its 12.5 pounds make it...

... chart with the SyQuest Mass Mic DataPak 88, and also discusses various similarities between the **two drives** . Contains **two** tables. (jo)

8/3,K/7 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00234331 91MU02-050

Ehman 44 MB Removable

Costa, Steve

MacUser , February 1, 1991 , v7 n2 p218, 224, 2 Pages

ISSN: 0884-0997

Ehman 44 MB Removable

Presents a favorable review of the Ehman 45 **MB Removable** (\$629), a Syquest cartridge drive from Ehman Engineering Inc., Evanston, WY (800, 307). The drive...

... well built, features dual-fuse protection, and the case provides two switched AC outlets. The **drive** carries a **two** year warranty, with a one year warranty on the disk. Includes one photo. (djd)

Identifiers: Ehman 45 **MB Removable** ; Ehman Engineering

8/3,K/8 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00234323 91MU02-042

Alliance Peripheral 45MB Removable

Costa, Steve

MacUser , February 1, 1991 , v7 n2 p222, 1 Pages

ISSN: 0884-0997

Alliance Peripheral 45MB Removable

Presents a mixed review of the Alliance Peripheral 45MB **Removable** (\$599 single, \$999 **dual**), a Syquest cartridge **drive** from Alliance Peripheral Systems, Independence, MO (800, 816). The drive has a formatted capacity of...

... programs for password protection and diagnostics. The package also includes 12.5MB of shareware. The **drive** has a **two** year warranty, with a one year warranty on the disk. The vendor provides toll-free...

Identifiers: Alliance Peripheral 45 MB Removable ; Alliance
Peripheral Systems

8/3,K/9 (Item 4 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00228043 90MU11-010

Maximum movable megabytes : erasable optical drives Big data-storage problems? One of these 20 erasable optical drives could be the solution.

Rizzo, John

MacUser , November 1, 1990 , v6 n11 p102-130, 19 Pages
ISSN: 0884-0997

Maximum movable megabytes : erasable optical drives Big data-storage problems? One of these 20 erasable optical drives could...

...Includes a tutorial on how erasable optical drives work, a comparison of storage cost per MB for erasable optical, magnetic hard disks, and removable magnetic hard disks. Includes a benchmark test comparing performance of 20 erasable optical drives. Sidebars provide descriptions of two drives received too late for testing and discusses future developments in this technology. Drives rated best...

8/3,K/10 (Item 5 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00212559 90PG03-031

Two SX-based portables

Portable Computing , March 1, 1990 , v4 n3 p62-63, 2 Pages
ISSN: 0890-3868

...RAM, expandable to 4MB, a 40MB hard drive, one 1.44MB 3.5-inch floppy drive , two serial ports, a parallel port, and a blue-on-white EGA-compatible backlit LCD with...

... Regal SX features 1MB of RAM, expandable to 16MB, a 40MB hard drive, 1.44- MB 3.5-inch floppy drive, a 1.2MB 5.25-inch external floppy drive , two full-sized IBM expansion slots, an EGA-compatible gas-plasma display and a removable keyboard. Notes that it is AC-powered. Contains two photos. (v1)

8/3,K/11 (Item 6 from file: 233)
DIALOG(R)File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00199187 89MA08-244

44- MB Bernoulli Box able performer

Coleman, Dale

MacWEEK , August 15, 1989 , v3 n30 p42, 47, 2 Pages
ISSN: 0892-8118

44- MB Bernoulli Box able performer

Presents a favorable review of Bernoulli Box II/4 (\$1,795: single drive , \$2,795: dual drive , \$125: per cartridge), a 5.25-inch, 44MB removable drive, from Iomega Corp. of South Roy, UT (801). Says the drive incorporates flexible media...

8/3,K/12 (Item 7 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00130009 86FC10-022

Apple IIGS: Number five in the Apple II line delivers improved sound and graphics

Sullivan, Nick

Family Computing , Oct 1986 , v4 n10 p46-48, 3 Pages

ISSN: 0738-6079

... personal computer from Apple Computer Corp. Notes that it comes with 256K, expandable to 8 **megabytes** , **detachable** keyboard with 10-key numeric keypad, graphics display (4096 color capability), mouse, sound (15 musical...

...SmartPort for connecting both 5 and 1/4 and 3 and 1/2 inch disk **drives** , **two** 8-pin serial ports, 9-pin game port, and built-in battery-powered clock. Says...

8/3,K/13 (Item 8 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00098247 84KM10-012

Megabytes for Macintosh

Heid, Jim

Microcomputing , Oct 1984 , v8 n10 p74-78, 5 Pages

ISSN: 0744-4567

Megabytes for Macintosh

Favorable reviews of **two** disk **drives** for the Macintosh: Mac Disk (\$2395) from Davong Systems Inc. is a 10M fixed Winchester disk drive and Mac Drive (\$1995) from Tecmar Inc. is a 5M **removable** hard disk drive. Reviewer prefers the Mac Disk because it is faster and better designed...

8/3,K/14 (Item 1 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

09117472

all that jaz

HONG KONG: IOMEGA PROMOTES JAZ DRIVE

The HongKong Standard (XKR) 10 Jun 1999 p.pc12

Language: ENGLISH

Iomega is offering a special price for its Jaz **removable** disk drive until the end of June 1999 in Hong Kong. Jaz **drive** plus **two** Jaz 2-gigabyte cartridges, IomegaWare software and a brief case are priced at HK\$ 3...

...computing platforms. The Jaz drive can run at a transfer rate up to 8.7 **megabytes** per second.

8/3,K/15 (Item 2 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

04210792

DIODE EXPORT LAUNCHES LAPTOP

NETHERLANDS - DIODE EXPORT LAUNCHES LAPTOP

Byte (BYE) 0 April 1991 p90IS-20

ISSN: 0360-5280

Diode Export (Houten, Netherlands) has launched the DEX-CP286 laptop with an 80-key **detachable** keyboard. Other IBM PS/2 compatible keyboards can be connected to the machine. A 12 MHz 90C286 microprocessor powers the product, which includes 1 **MB** DRAM (expandable to 4MB); a 20- or 40- **MB** hard disk drive; 3.5 inch 1.44 **MB** floppy disk **drive**; **two** serial and one parallel ports; a bus connector for an expansion box and an RGB...

8/3,K/16 (Item 3 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

03420379

EDN LAUNCHES ALL-STAR PC

US - EDN LAUNCHES ALL-STAR PC

EDN Magazine (EDNM) 29 March 1990 p107,108+

ISSN: 0012-7515

...subsystems are made up of floppy disk, SCSI and optical WORM drive. Four floppy disk **drives**, **two** 5.25 in and two 3.5 in, providing **removable** data storage and allowing standardised data interchange with other PCs are supported by the floppy-disk subsystem. Two 330 **Mb** hard disk for the computer's main data-storage requirements are controlled by the SCSI...

8/3,K/17 (Item 4 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

02602374

MDB SYSTEMS INTRODUCES **REMOVABLE** DISK-DRIVE

UK - MDB SYSTEMS INTRODUCES **REMOVABLE** DISK-DRIVE

Infomatics Daily Bulletin (IDB) 3 April 1989 p3

MDB SYSTEMS INTRODUCES **REMOVABLE** DISK-DRIVE

UK - MDB SYSTEMS INTRODUCES **REMOVABLE** DISK-DRIVE

MDB Systems has launched a version of its Data Shuttle 2000, **removable** disk drive for DEC's UDA-50 and HSC-50/70 controllers, the 2000-RA. It is compatible with DEC's RA series **drives**, has **two** 760 **Mb** disks, and costs GBP8064.

8/3,K/18 (Item 1 from file: 483)

DIALOG(R)File 483:Newspaper Abs Daily

(c) 2004 ProQuest Info&Learning. All rts. reserv.

04522070

3 (almost) perfect notebook computers

Silverman, Dwight

Houston Chronicle, Sec E, p 5, col 2

Apr 20, 1997

ISSN: 1074-7109 NEWSPAPER CODE: HC
DOCUMENT TYPE: Commentary; Newspaper
LANGUAGE: English RECORD TYPE: ABSTRACT
LENGTH: Long (18+ col inches)

...ABSTRACT: get back to the office. This notebook comes with a 150 megahertz Pentium chip, 16 **megabytes** of random access memory, a 12.1-inch active matrix screen, a **removable** 1.4-gigabyte hard **drive** , **two** PC-card slots, a six-speed CD-ROM drive, stereo sound, infrared capabilities and all...
?

9/3,K/1 (Item 1 from file: 233)
DIALOG(R) File 233:Internet & Personal Comp. Abs.
(c) 2003 EBSCO Pub. All rts. reserv.

00295204 92PW11-009

TEAC FD-505 -- Storage

Miller, Dan

PC World , November 1, 1992 , v10 n11 p114-115, 2 Page(s)

ISSN: 0737-8939

Company Name: **TEAC** America

Product Name: **TEAC** FD-505

TEAC FD-505 -- Storage

Company Name: **TEAC** America

Product Name: **TEAC** FD-505

Presents a favorable review of the **TEAC** FD-505 (\$249), a combination floppy drive from **TEAC** America Inc. (213). Features of the half-height unit include a 5.25- and a...

... latter measuring no more than half an inch in thickness. Says that installation merely involves **removing** the old 5.25 drive, inserting the **TEAC** unit in its place, then labeling the **two** floppy **drives** A: and B: on the CMOS utility; though the two-in-one package costs more...

Identifiers: **TEAC** FD-505; **TEAC** America

?

File 2:INSPEC 1969-2002/May W3
 (c) 2002 Institution of Electrical Engineers
 File 6:NTIS 1964-2002/Jun W1
 (c) 2002 NTIS, Intl Cpyrght All Rights Res
 File 8:Ei Compendex(R) 1970-2002/May W3
 (c) 2002 Engineering Info. Inc.
 File 34:SciSearch(R) Cited Ref Sci 1990-2002/May W3
 (c) 2002 Inst for Sci Info
 File 35:Dissertation Abs Online 1861-2002/Apr
 (c) 2002 ProQuest Info&Learning
 File 65:Inside Conferences 1993-2002/May W3
 (c) 2002 BLDSC all rts. reserv.
 File 77:Conference Papers Index 1973-2002/Mar
 (c) 2002 Cambridge Sci Abs
 File 94:JICST-EPlus 1985-2002/Mar W5
 (c)2002 Japan Science and Tech Corp(JST)
 File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Apr
 (c) 2002 The HW Wilson Co.
 File 144:Pascal 1973-2002/May W3
 (c) 2002 INIST/CNRS
 File 238:Abs. in New Tech & Eng. 1981-2002/May
 (c) 2002 Reed-Elsevier (UK) Ltd.
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
 (c) 1998 Inst for Sci Info
 File 583:Gale Group Globalbase(TM) 1986-2002/May 20
 (c) 2002 The Gale Group
 File 233:Internet & Personal Comp. Abs. 1981-2002/May
 (c) 2002 Info. Today Inc.

Set	Items	Description
S1	40313	DIS??? (3N) DRIVE?
S2	16892	S1 AND (TWO OR 2)
S3	12484	S1 AND (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	714938	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	178900	MODULAR? OR INTERCHANG?
S6	989629	OCCUP? OR SITTING OR INSTALL?
S7	18708	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S8	0	S1 AND (HALF OF FULL OR DOUBLE) (3N) FORM() FACTOR?
S9	456	S1 AND (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S10	24875	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S11	1551	S1 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S12	18951	(LISA? OR APPLE) (3N) COMPUTER?
S13	1	S4 AND S11 AND (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S14	17	S1 AND (HALF OF FULL OR DOUBLE) (3N) FORM?
S15	0	S14 AND S4 AND S7
S16	0	S14 AND S7
S17	3	S14 AND S4
S18	3	RD S17 (unique items)
S19	3	S9 AND S7
S20	3	S19 NOT (S13 OR S17)
S21	3	RD S20 (unique items)
S22	5	S12 AND S9
S23	4	S22 NOT (S13 OR S14 OR S19)
S24	4	RD S23 (unique items)

13/3,K/1 (Item 1 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
(c) 2002 The Gale Group. All rts. reserv.

02204244

DEC EQUIPS NEW MICROVAXES WITH **THIN** FILM-BASED **DISK** **DRIVE**
UK - DEC EQUIPS NEW MICROVAXES WITH **THIN** FILM-BASED **DISK** **DRIVE**
Computergram International (CGI) 20 October 1988 p1
ISSN: 0268-716X

DEC EQUIPS NEW MICROVAXES WITH **THIN** FILM-BASED **DISK** **DRIVE**
UK - DEC EQUIPS NEW MICROVAXES WITH **THIN** FILM-BASED **DISK** **DRIVE**

DEC has launched its **replacements** for the MicroVAX II range, the MicroVAX 3300 and 3400. They feature the first product from a new generation of hard **disk drives**, which DEC calls 'integrated storage elements'. The unit is the RF30 ISE, a **half height** 150 Mbyte **thin** -film based product with a built-in controller, and is claimed to better the input...

18/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

02661522 INSPEC Abstract Number: D86001445

Title: The big apple at last! (Apple Mac plus)

Author(s): Kemp, A.

Journal: What Micro p.28-30

Publication Date: April 1986 Country of Publication: UK

CODEN: WHMID6 ISSN: 0264-441X

Language: English

Subfile: D

...Abstract: which is increased from 512 K to 1 M. The second difference is in the **disk drives**. They now accept the **double**-sided **format** that holds 800 K as opposed to the previous maximum of 400 K. The keyboard...

...difference in the new machine is that the old 64 K ROM chips have been **replaced** by 128 K of ROM, which holds a new, faster and more efficient system of...

...Identifiers: **disk drives** ;

18/3,K/2 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00267309 92HC02-017

TurboTax for Windows

Haddon, Margie L

Home Office Computing , February 1, 1992 , v10 n2 p61, 1 Page(s)

ISSN: 0899-7373

Company Name: ChipSoft

Product Name: TurboTax for Windows

Presents a very favorable review of TurboTax for Windows (\\$80; **upgrade** \\$55), personal tax-preparation software from ChipSoft (619). Runs on IBM PCs and compatibles (286 or better) with a hard **disk drive**, Windows 3.0, and DOS 3.0 or higher. Says that this program, formerly called...

... laser printers replicates actual IRS documents; data entry is either directly to forms or through **Forms** Guide; you can **double** click on any line to access actual IRS instructions; it supports 15 states (\\$49 each...

18/3,K/3 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00248567 91HC09-017

An upgrade to double your drive

Waters, Crystal

Home Office Computing , September 1, 1991 , v9 n9 p12, 1 Pages

ISSN: 0899-7373

Company Name: CMS Enhancements

Product Name: All-Media-Floppy

An upgrade to double your drive

Reports that CMS Enhancements (714) announced the release of the All-Media-Floppy (\$329), a **double - format** drive: a 5.25- and 3.5-inch high-density floppy **disk drive** packed into the size of one half-height drive bay. It is easy to install...

Descriptors: Floppy **Disk Drive** ; Product Announcement

21/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

03722912 INSPEC Abstract Number: C90063722

Title: Large-capacity disks

Author(s): Falk, H.

Journal: Electronic Library vol.8, no.3 p.209-11

Publication Date: June 1990 Country of Publication: UK

CODEN: ELLIDZ ISSN: 0264-0473

Language: English

Subfile: C

...Abstract: that conform to the 5.25 in. width commonly used for IBM-style personal computer **disk drives**, or the 3.25 in. width used in both IBM-style and Macintosh computers. A **full height** 5.25 in. disk is about 3.5 in. high, while **half - height** disks are about 1.75 in. high, so these **half - height** units will fit into the **same space** as one **full - height** unit. Since erasable optical discs have become available, the author compares their characteristics with those...

...Identifiers: IBM-style personal computer **disk drives** ;

21/3,K/2 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2002 Engineering Info. Inc. All rts. reserv.

02003073 E.I. Monthly No: EI8608069270 E.I. Yearly No: EI86022242

Title: DISC DRIVE AND CONTROL - THE SINGLE BOARD SOLUTION.

Author: Sherry, Maurice

Source: Electronics Industry (New Malden, England) v 12 n 1 Jan 1986 p 45, 47

Publication Year: 1986

CODEN: EINDD9 ISSN: 0307-2401

Language: ENGLISH

Title: DISC DRIVE AND CONTROL - THE SINGLE BOARD SOLUTION.

Abstract: Virtually all microcomputer processing units now have the **same space** allowance for storage drive systems. This allowance is 1.63 X 5.75 X 8.0 inches which typically accommodates a standard 5 1/4 in. floppy **disk drive** or a standard 'Winchester' (hard) **disk drive**. Since **disk drive** units are getting slimmer a natural development must be to combine all of the drive...

...slot' as one unit. The Xebec OWL, the world's first combined 5.25 inch **half - height** Winchester **disk drive** and controller, was recently introduced into the European market. Aimed at the single-user microcomputer

...
Identifiers: SLIMLINE STORAGE UNITS; DRIVE ELECTRONICS; STORAGE CAPACITY; WINCHESTER **DISK DRIVE**

21/3,K/3 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00194688 89PR06-005

Giga has it taped A 1,200MB storage system now fits into the same space as a floppy disc drive

Kelly, Mark

Practical Computing, June 1, 1989, v12 n6 p16, 1 Pages

ISSN: 0141-5433

Giga has it taped A 1,200MB storage system now fits into the same space as a floppy disc drive

...data transfer rate of 192KB per second. It fits into a 5 1/2 inch **full - height** drive bay, and its controller card requires a 16-bit expansion slot. Within the IBM...

24/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2002 Institution of Electrical Engineers. All rts. reserv.

02270135 INSPEC Abstract Number: C84029893, D84001617

Title: The Apple IIc personal computer

Author(s): Markoff, J.

Journal: BYTE vol.9, no.5 p.276-84

Publication Date: May 1984 Country of Publication: USA

CODEN: BYTEDJ ISSN: 0360-5280

Language: English

Subfile: C D

Title: The Apple IIc personal computer

Abstract: Apple Computer has introduced the fourth version of the Apple II product line, the Apple IIc. The...

... an evolution in Apple II products in that it is truly portable. A built-in **half - height** 5/sup 1///sub 4/-inch **disk - drive** unit is accessed from the right-hand side of the case. The IIc has an...

...Identifiers: **half - height** 5/sup 1///sub 4/-inch **disk - drive** unit

24/3,K/2 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00204442 89MW11-014

The Macintosh Portable Apple's new portable is moving in the right direction, but has it arrived?

Webster, Bruce F

Macworld , November 1, 1989 , v6 n11 p144-151, 8 Pages

ISSN: 0741-8647

...6,500 to \$7,000), a 16MHz 68000-based microcomputer system with eight ports, a **half - height** SuperDrive floppy **disk drive** , and LCD screen, 63-key built-in keyboard, 256K ROM, lead-acid power supply, and...

Identifiers: Macintosh Portable; **Apple Computer**

24/3,K/3 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00102668 85PO02-017

The Apple IIc: Innovation or just a facelift for an old machine?

Sacks, Jonathan

Popular Computing , Feb 1985 , v4 n4 p104-107, 3 Pages

ISSN: 0279-4721

A mixed review of the Apple IIc (\$1195), a transportable **computer** from **Apple Computer** Inc. Notes it contains a 65C02 microprocessor, 6-color or 16-color graphics, 40 or...

...ports, one video expansion port, 128K RAM, 16K ROM, one 143K 5 1/4 inch **half height disk drive** , external **disk** port, keyboard, Dvorak keypad switch, and 12 foot video cable. Considers it a second facelift...

Identifiers: **Apple IIc; Apple Computer , Inc.**

24/3,K/4 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2002 Info. Today Inc. All rts. reserv.

00099449 84IC12-013

DuoDisk

Englesher, Charles

inCider , Dec 1984 , v2 n12 p149-150, 2 Pages

ISSN: 0740-0101

A favorable review of DuoDisk (\$729), a dual **half - height** floppy **disk drive** for the Apple II, II+ and IIe by **Apple Computer Inc.** Describes its set-up, connections and ease of use. Reviewer recommends it to those...

Descriptors: Hardware Review; Floppy Disk Drive ; Apple II

Identifiers: DuoDisk; **Apple Computer , Inc.**; **Apple II**; **Apple II+**; **Apple IIe**
?

File 344:CHINESE PATENTS ABS APR 1985-2002/APR
(c) 2002 EUROPEAN PATENT OFFICE
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)
(c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200232
(c) 2002 Thomson Derwent

Set	Items	Description
S1	90051	DIS???(3N)DRIVE?
S2	43227	S1 AND (TWO OR 2)
S3	33146	S1 AND (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	404198	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	116927	MODULAR? OR INTERCHANG?
S6	1305508	OCCUP? OR SITTING OR INSTALL?
S7	21681	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S8	0	S1 AND (HALF OF FULL OR DOUBLE) (3N) FORM() FACTOR?
S9	187	S1 AND (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S10	128821	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S11	4270	S1 AND (TWIGGY OR THIN OR SKINNY OR NARROW?)
S12	45	(LISA? OR APPLE) (3N) COMPUTER?
S13	0	S4 AND S11 AND (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIG- HT?)
S14	76	S1 AND (HALF OF FULL OR DOUBLE) (3N) FORM?
S15	0	S14 AND S4 AND S7
S16	0	S14 AND S7
S17	1	S14 AND S4
S18	0	S9 AND S7
S19	0	S12 AND S9
S20	1003	(S2 OR S3) AND S4
S21	2	S20 AND S7
S22	2	S21 NOT S17

17/3,K/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.

02211169 **Image available**
DISK CONTROL DEVICE

PUB. NO.: 62-128069 [JP 62128069 A]
PUBLISHED: June 10, 1987 (19870610)
INVENTOR(s): AWAZU KOICHI
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 60-268579 [JP 85268579]
FILED: November 29, 1985 (19851129)
JOURNAL: Section: P, Section No. 637, Vol. 11, No. 350, Pg. 8,
November 17, 1987 (19871117)

ABSTRACT

PURPOSE: To decrease the occurring frequency of the error of data **replacement** by discriminating the track form of a using disk, executing the data writing/ reading control at one track unit at the time of a **double track form** and executing the writing/reading control of the data at two track units at the...

...CONSTITUTION: In the **disk drive** for a double track, it is discriminated whether the using disk is a **double track form** or a single track form. At the time of the **double track form**, the writing/reading control is executed for the data by one track unit and at...

... units. Thus, the occurring frequency of the error at the time of executing the data **replacement** by the disk of the single track can be decreased between a double track **disk drive** and the single track **disk drive**.

?

22/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.

009942533 **Image available**
WPI Acc No: 1994-210246/199426
XRPX Acc No: N94-165578

**Disc playing device having magazine rotatably mounted on base chassis -
has guide member attached to base chassis to cover magazine and permit
its rotation, with disc being accommodated by rollers through slit in
front panel**

Patent Assignee: SANYO ELECTRIC CO LTD (SAOL); SANYO ELECTRIC CO (SAOL)
Inventor: NODA T; TSURUTA Y; YOSHIOKA A; YOSHIDA A
Number of Countries: 006 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 604986	A2	19940706	EP 93121026	A	19931228	199426 B
CA 2112534	A	19940629	CA 2112534	A	19931229	199434
EP 604986	A3	19950419				199545
US 5615184	A	19970325	US 93175282	A	19931228	199718
SG 49854	A1	19980615	SG 967613	A	19931228	199836
CA 2112534	C	20000418	CA 2112534	A	19931229	200036
EP 604986	B1	20011017	EP 93121026	A	19931228	200169
DE 69330938	E	20011122	DE 630938	A	19931228	200201
			EP 93121026	A	19931228	

Priority Applications (No Type Date): JP 92348500 A 19921228

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 604986	A2	E	55	G11B-017/24	
-----------	----	---	----	-------------	--

Designated States (Regional): DE FR GB

CA 2112534	A			G11B-017/04	
------------	---	--	--	-------------	--

US 5615184	A		49	G11B-017/22	
------------	---	--	----	-------------	--

SG 49854	A1			G11B-017/24	
----------	----	--	--	-------------	--

CA 2112534	C	E		G11B-017/04	
------------	---	---	--	-------------	--

EP 604986	B1	E		G11B-017/24	
-----------	----	---	--	-------------	--

Designated States (Regional): DE FR GB

DE 69330938	E			G11B-017/24	Based on patent EP 604986
-------------	---	--	--	-------------	---------------------------

...Abstract (Basic): which one is selected for playing, has a base chassis supporting a dish-like magazine (3), which is rotatably mounted and contains disc storing recesses or grooves. The magazine has an...

...corresp. recess, and permits rotation of the magazine and is fixed to the chassis. A **disc** insertion **drive** is opposed to a partic. **disc** recess, and a **drive** device rotates the magazine...

...Abstract (Equivalent): and for playing a desired disc, or to eject a disc outside the device and **replace** the disc with another disc, comprising...

... **disc** insertion- **drive** means disposed as opposed to a specified one of the disc holding grooves, each of...

...the disc from falling from the magazine, the guide member being formed with guide grooves **spaced** apart by a **same** angle as the angle between disc insertion-discharge means and playing means about the central

22/3,K/2 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Thomson Derwent. All rts. reserv.

009942533 **Image available**
WPI Acc No: 1994-210246/199426
XRPX Acc No: N94-165578

**Disc playing device having magazine rotatably mounted on base chassis -
has guide member attached to base chassis to cover magazine and permit**

its rotation, with disc being accommodated by rollers through slit in front panel

Patent Assignee: SANYO ELECTRIC CO LTD (SAOL); SANYO ELECTRIC CO (SAOL)

Inventor: NODA T; TSURUTA Y; YOSHIOKA A; YOSHIDA A

Number of Countries: 006 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 604986	A2	19940706	EP 93121026	A	19931228	199426 B
CA 2112534	A	19940629	CA 2112534	A	19931229	199434
EP 604986	A3	19950419				199545
US 5615184	A	19970325	US 93175282	A	19931228	199718
SG 49854	A1	19980615	SG 967613	A	19931228	199836
CA 2112534	C	20000418	CA 2112534	A	19931229	200036
EP 604986	B1	20011017	EP 93121026	A	19931228	200169
DE 69330938	E	20011122	DE 630938	A	19931228	200201
			EP 93121026	A	19931228	

Priority Applications (No Type Date): JP 92348500 A 19921228

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 604986	A2	E	55	G11B-017/24	
-----------	----	---	----	-------------	--

Designated States (Regional): DE FR GB

CA 2112534	A			G11B-017/04	
------------	---	--	--	-------------	--

US 5615184	A		49	G11B-017/22	
------------	---	--	----	-------------	--

SG 49854	A1			G11B-017/24	
----------	----	--	--	-------------	--

CA 2112534	C	E		G11B-017/04	
------------	---	---	--	-------------	--

EP 604986	B1	E		G11B-017/24	
-----------	----	---	--	-------------	--

Designated States (Regional): DE FR GB

DE 69330938	E			G11B-017/24	Based on patent EP 604986
-------------	---	--	--	-------------	---------------------------

...Abstract (Basic): which one is selected for playing, has a base chassis supporting a dish-like magazine (3), which is rotatably mounted and contains disc storing recesses or grooves. The magazine has an...

...corresp. recess, and permits rotation of the magazine and is fixed to the chassis. A **disc** insertion **drive** is opposed to a partic. **disc** recess, and a **drive** device rotates the magazine...

...Abstract (Equivalent): and for playing a desired disc, or to eject a disc outside the device and **replace** the disc with another disc, comprising...

... **disc** insertion- **drive** means disposed as opposed to a specified one of the disc holding grooves, each of...

...the disc from falling from the magazine, the guide member being formed with guide grooves **spaced** apart by a **same** angle as the angle between disc insertion-discharge means and playing means about the central

?

File 9:Business & Industry(R) Jul/1994-2002/May 20
 (c) 2002 Resp. DB Svcs.
 File 15:ABI/Inform(R) 1971-2002/May 20
 (c) 2002 ProQuest Info&Learning
 File 484:Periodical Abs Plustext 1986-2002/May W3
 (c) 2002 ProQuest
 File 624:McGraw-Hill Publications 1985-2002/May 20
 (c) 2002 McGraw-Hill Co. Inc
 File 275:Gale Group Computer DB(TM) 1983-2002/May 20
 (c) 2002 The Gale Group
 File 570:Gale Group MARS(R) 1984-2002/May 20
 (c) 2002 The Gale Group
 File 621:Gale Group New Prod.Annou.(R) 1985-2002/May 15
 (c) 2002 The Gale Group
 File 636:Gale Group Newsletter DB(TM) 1987-2002/May 20
 (c) 2002 The Gale Group
 File 613:PR Newswire 1999-2002/May 21
 (c) 2002 PR Newswire Association Inc
 File 623:Business Week 1985-2002/May 20
 (c) 2002 The McGraw-Hill Companies Inc
 File 610:Business Wire 1999-2002/May 21
 (c) 2002 Business Wire.
 File 141:Readers Guide 1983-2002/Apr
 (c) 2002 The HW Wilson Co
 File 16:Gale Group PROMT(R) 1990-2002/May 20
 (c) 2002 The Gale Group
 File 160:Gale Group PROMT(R) 1972-1989
 (c) 1999 The Gale Group
 File 47:Gale Group Magazine DB(TM) 1959-2002/May 21
 (c) 2002 The Gale group
 File 148:Gale Group Trade & Industry DB 1976-2002/May 21
 (c)2002 The Gale Group
 File 634:San Jose Mercury Jun 1985-2002/May 19
 (c) 2002 San Jose Mercury News
 File 635:Business Dateline(R) 1985-2002/May 18
 (c) 2002 ProQuest Info&Learning
 File 647:CMP Computer Fulltext 1988-2002/May W2
 (c) 2002 CMP Media, LLC
 File 674:Computer News Fulltext 1989-2002/May W1
 (c) 2002 IDG Communications
 File 810:Business Wire 1986-1999/Feb 28
 (c) 1999 Business Wire
 File 813:PR Newswire 1987-1999/Apr 30
 (c) 1999 PR Newswire Association Inc

Set	Items	Description
S1	325194	DIS??? (3N) DRIVE?
S2	42836	S1(5N) (TWO OR 2)
S3	40670	S1(5N) (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	4042425	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	496428	MODULAR? OR INTERCHANG?
S6	3912196	OCCUP? OR SITTING OR INSTALL?
S7	61176	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S8	76	S1(5N) (HALF OF FULL OR DOUBLE) (3N) FORM?
S9	3212	S1(5N) (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S10	153096	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S11	3055	S1(5N) (TWIGGY OR THIN OR SKINNY OR NARROW?)
S12	295046	(LISA? OR APPLE) (3N) COMPUTER?
S13	246	(S8 OR S9) (S) S4
S14	2	S13(S) S7
S15	2	RD S14 (unique items)
S16	1	S4(S) S11(S) (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S17	25	S12(S) (S8 OR S9)
S18	0	S17(S) S4
S19	25	S17 NOT (S14 OR S16)
S20	21	RD S19 (unique items)
S21	6250	(S2 OR S3) (S) S4
S22	10	S21(S) S7

S23	10	S22 NOT (S19 OR S14 OR S16)
S24	7	RD S23 (unique items)
S25	165	(S8 OR S9) (S)S10
S26	17	S25(S)S4
S27	2	S26(S)S7
S28	2	RD S27 (unique items)

15/3,K/1 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01814706

**MAGNESYS DISCLOSES STRATEGIC PLANS TO FURTHER EXTEND MEMORY SUBSYSTEM
PRODUCTS INTO INDUSTRIAL MICROCOMPUTER MARKETPLACE**
News Release October 5, 1987 p. 1

... data. Unlike other non-volatile magnetic media, MBM does not wear out. Magnesys products directly **replace** 3.5- and 5.25-inch **half - height** floppy and Winchester **disk drives** and tape systems, fitting into the exact **space** with the **identical** power connector. The products serve the rapidly growing market for file-structured memory in rugged...

15/3,K/2 (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01799672

**MAGNESYS INTRODUCES "PLUG N' PLAY" EVALUATION KIT FOR SPEEDY SYSTEM
INTEGRATION OF MAGNETIC BUBBLE MEMORY SUBSYSTEM**
News Release July 10, 1987 p. 1

... cost-effective storage memory which is portable, compact and permanent. The Magnesys products are direct **replacements** for 3.5- and 5.25-inch **half - height** floppy and Winchester **disk drive**, and tape systems, or conventional memory. Magnesys' Electronic Drive fits into the exact **space** and has the **identical** power connector as a floppy or Winchester drive. An embedded SCSI chip and supporting firmware...
?

16/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02099197 SUPPLIER NUMBER: 19747498 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**The RAID kit that didn't. (Distributed Processing Technology's RAIDStation
Kit RAID array system) (includes related article on performance results)
(Hardware Review) (Evaluation) (Brief Article)**
Zulich, Michael J.
Windows Sources, v5, n10, p121(2)
Oct, 1997
DOCUMENT TYPE: Evaluation Brief Article ISSN: 1065-9641
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 817 LINE COUNT: 00065

... 5.
The three-bay external drive cabinet, also available separately for
\$1,095, supports any **half - height Narrow SCSI hard disk drive** . We
installed three Seagate ST34501N SCSI drives, which aren't included with
the RAIDStation Kit...

...or manufacturer, though small drives will limit your storage capacity.
All the drives are hot- **swappable** , and the cabinet contains onboard
circuitry that monitors internal heat and detects drive failure.
We...

20/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01654138 SUPPLIER NUMBER: 16282446
Notebooks move out of commodity area; due this fall: Pentiums, CD-ROMs, multimedia docking.
Gillooly, Brian
Computer Reseller News, n597, p3(2)
Sept 26, 1994
ISSN: 0893-8377 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: The IBM PC Co, Toshiba America Information Systems Inc, NEC Technologies Inc and **Apple Computer** plan to introduce more sophisticated notebook computers in the fall of 1994. This new generation ...

...and 100-MHz 486DX4-based ThinkPad notebook computers in mid-Oct 1994 that include a **half - height** CD-ROM **drive** , 810MB hard **disk** , and add-in card for **full** -motion video. Toshiba will also debut a 75-MHz notebook computer. NEC Technologies is planning to ship a Media Doc multimedia docking station in Dec 1994 for its notebook **computers** . **Apple** will add PowerBook models in the fall of 1994 that contain half-height CD-ROM...

20/3,K/2 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01463843 SUPPLIER NUMBER: 11555380 (USE FORMAT 7 OR 9 FOR FULL TEXT)
New fruits from Apple: more power, functionality: palatable PowerBooks, luscious LaserWriters. (Product Announcement)
Rosenbaum, Daniel
Computer Shopper, v11, n12, p140(1)
Dec, 1991
DOCUMENT TYPE: Product Announcement ISSN: 0886-0556 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 338 LINE COUNT: 00024

ABSTRACT: **Apple Computer** Corp announces eight new high-end products, including notebook computers, microcomputers, and laser printers. Apple...

...standing tower. The Quadra 900 weighs 37 pounds, has five expansion slots, space for two **full - height** and two **half - height disk drives** , and 300 watts of power. Apple also has a new Classic offering, the 68030-based...

20/3,K/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01408173 SUPPLIER NUMBER: 10876628
Apple using IBM drives.
Costlow, Terry
Electronic Engineering Times, n644, p4(1)
June 3, 1991
ISSN: 0192-1541 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: **Apple Computer** will begin shipping Macintosh FX and CI models with internal **half - height** , 3.5-inch 160Mbyte **disk drives** supplied by competitor IBM. The arrangement is the first publicly announced result of IBM's...

20/3,K/4 (Item 4 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01383278 SUPPLIER NUMBER: 09536647 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Saving space: CD ROMs are an ideal alternative to wasteful mountains of paper. (includes related article on several CD-ROM products)
Green, Terence
Which Computer?, v13, n10, p134(3)
Oct, 1990
ISSN: 0140-3435 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2147 LINE COUNT: 00163

... Philips, Sony, Hitachi, Toshiba, NEC and Sanyo supply CD ROM drives with interface kits for **Apple** or IBM **computers**. CD ROM drives for IBM PC, PS/2 and compatible computers can also be supplied to fit into a standard 5 1/4-inch **half height floppy disk drive bay**.

IBM compatible interface kits consist of an expansion card which must be fitted in...

20/3,K/5 (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01286509 SUPPLIER NUMBER: 07294503 (USE FORMAT 7 OR 9 FOR FULL TEXT)
First Apple Macintosh II clone appears.
Computergram International, n1105, pELECTRNC ED
Jan 31, 1989
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 182 LINE COUNT: 00013

TEXT:

...by going to the licensable NuBus for its high-end models in the Macintosh line, **Apple Computer** Inc may have opened itself up to the threat of having the thing cloned. At...

...The machine comes in a tower enclosure with five NuBus slots and space for 10 **half - height disk drives**. It is designed to take a wide range of co-processors - Motorola 88000 and Am29000...

20/3,K/6 (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01131018 SUPPLIER NUMBER: 00645522
Apple Announces New Products That Dazzle, New Enhancements That Perform.
McKibbon, W.L.; Ryan, B.; Statt, P.; Gubernat, S.
inCider, v3, n11, p12-13
Nov., 1985
DOCUMENT TYPE: product announcement ISSN: 0740-0101 LANGUAGE:
ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: **Apple Computer** has introduced six new peripherals for its Apple II line. The new products are: The...

...for main memory or RAM disk, at \$250 for 256K size; the UniDisk 3.5 **double -sided single disk drive** with 800K bytes **formatted** capacity priced at about \$500 without controller; the software package Catalyst 3.0, to be...

20/3,K/7 (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01117919 SUPPLIER NUMBER: 00630432
Unidisk for Apple II.

Call-A.P.P.L.E., v8, n7, p49
July, 1985

DOCUMENT TYPE: product announcement ISSN: 8755-4909 LANGUAGE:
ENGLISH RECORD TYPE: ABSTRACT

ABSTRACT: UniDisk from **Apple Computer** is a single **half - height** floppy **disk drive** for **Apple II computers**. It costs \$429 with a controller card or \$329 without the card. Full compatibility with...

20/3,K/8 (**Item 8 from file: 275**)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01061789 SUPPLIER NUMBER: 00553833
Apple's On-the-Road Warrior: IIc Prepares to Do Battle.
Consumer Electronics Monthly, v12, n6, pA34
June, 1984
DOCUMENT TYPE: product announcement LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

ABSTRACT: The **Apple IIc** portable **computer** is aimed at the mass market. Its packaging is the most consumer oriented that the...

...packages available for the IIc. The IIc weighs 7.5 pounds, has 128K RAM, a **half height** 5.25 inch **disk drive** and a \$1,295 retail price. Options for the computer include two printers, 300 or...

20/3,K/9 (**Item 1 from file: 160**)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02306478
PANASONIC INTRODUCES 5.25" WORM OPTICAL DESK DRIVE WITH 940 MEGABYTES OF STORAGE CAPACITY
News Release September 7, 1989 p. 1

Panasonic Industrial Company's Memory Systems Division has introduced a new 5.25" **full - height** write-once, read many (WORM) optical **disk drive** for original equipment manufacturers. Designated the "LF-5012," the new disk drive uses phase change...

...LF-5012 is designed to be compatible with the IBM AT (R) and compatibles and **Apple** McIntosh (R) personal **computers** and workstations. The drive features an SCSI interface and offers a random access time of...

20/3,K/10 (**Item 2 from file: 160**)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02092200
PANASONIC INTRODUCES 5.25" WORM OPTICAL DISK DRIVES WITH 400 MEGABYTES OF STORAGE CAPACITY
News Release November 8, 1988 p. 1

Panasonic Industrial Company's Memory Systems Division has introduced a new 5.25" **full - height** write-once, read many (WORM) optical **disk drive** for original equipment manufacturers. Designated the "LF-5002," the new disk uses phase change recording...

... 5002 is designed to be compatible with the IBM PC/AT (TM) and compatibles and **Apple** Macintosh (TM) personal **computers**. The drive features an SCSI interface and offers a random access time of 190 milliseconds...

20/3,K/11 (Item 3 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02012698

CONTROL DATA INTRODUCES NEW DISK DRIVES FOR THE APPLE MACINTOSH MARKET
News Release July 28, 1988 p. 1

... increase user productivity by providing faster access to data than existing disk drives used in **Apple Macintosh computers**. The MacWren 5.25-inch **disk drives** include the new **full -and half - height** models ranging in capacity from 209 to 702 unformatted megabytes. Using Zone Bit Recording (ZBR...

... data transfer rates. The MacWren disk drives can be mounted internally or externally with the **Apple Macintosh II (TM) computer**.

Full text available on PTS New Product Announcements.

...

20/3,K/12 (Item 4 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01799025

CMS Enhancements introduces 5.25-in, half-height drive
Computer Reseller News October 26, 1987 p. 186
ISSN: 0893-8377

CMS Enhancements (Tustin, CA) has introduced a 5.25-in, **half - height** internal hard **disk drive**. The new PRO-140 II/i has a 140 Mbytes storage capacity, an access speed...

... delivering 30,000+ hard disk and tape-backup subsystems/mo, shipping 50 enhancement items for **Apple**, IBM, Compaq **Computer**, and AT&T Information Systems personal computers. ...

20/3,K/13 (Item 5 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01794037

VERBATIM ANNOUNCES THREE NEW FORMATS FOR BONUS ECONOMY DISKETTE LINE
News Release October 1, 1987 p. 1

... 400 kilobytes of formatted storage for systems such as the Apple Macintosh's single-sided **disk drive**. The 3.5-inch **double sided** microdisks can be **formatted** for 720 kilobytes of storage with systems such as the IBM Personal System/2 Model...

... computers. The 300 operated disks may also be formatted for 800 kilobytes of storage for **Apple Macintosh computers** using double-sided drives. These include the latest Macintosh II and Macintosh SE models.

Full...

20/3,K/14 (Item 6 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01357281

Macintosh 512K in new version.
COMPUTER RETAIL NEWS April 14, 1986 p. 8

Apple Computer has stopped production of its basic 512K Macintosh computer preferring instead to produce a new...

...to Apple dealers by end 4/86. The new version will include an 800 Kbyte, **half - height floppy disc drive**, and the same read-only memory chip set used in the Macintosh Plus. ...

20/3,K/15 (Item 7 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01046523

Product Preview: The Apple IIc Personal Computer.
BYTE May, 1984 p. 76-2841

Apple Computer 's IIc personal computer is a 'focused product;' it is designed to fit into a...

...25-in portable features a carrying handle that folds into a backplane. A built-in **half - height 5.25-in disc - drive** unit is accessed from the right-hand side of the case. The IIc is based...

20/3,K/16 (Item 8 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01042660

AS APPLE TAKES THE WRAPS OFF IIc.
Personal Computers Today May, 1984 p. 3

Apple Computer introduced its IIc, a loose-leaf notebook-size version of the IIe. Priced at \$1...

... 000 Apple II applications programs. The portable comes with 16K of read-only memory, a **half - height**, 5.25-inch floppy **disk drive**, and a switch allowing for a choice between a 40- and an 80-column display.
...

20/3,K/17 (Item 9 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01037466

HARDWARE: FRANKLIN UNVEILS FIRST PORTABLE.
Infoworld June 4, 1984 p. 48

Franklin Computer (Pennsauken, New Jersey) has introduced an **Apple** II-compatible portable **computer** available in 4 different configurations, 2 of which are compatible only with the Apple II...

... CX unit features either 64K or 128K random access memory and include 1 or 2 **half - height**, **double** -sided dual-density **disc drives**, a detachable keyboard with numeric keypad, 4 expansion slots, and a 7-in green-phosphor...

20/3,K/18 (Item 10 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01025003

Electronic newsletter: Apple attacks IBM in the home market with new IIc, price cut.
Electronics May 3, 1984 p. 41

Apple Computer introduced its 7.5 pound portable home computer to compete with IBM's PCjr. The...

... the IIe. The 11.5x12x2.5-in system features 128K of random access memory, a **half - height 5.25-in disc drive**, a 63-key keyboard, ports for adding an external disc drive, video monitors, a mouse...

20/3,K/19 (Item 11 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01022934

Sumitomo Pushes For US Half-Height Floppy Sales.
Electronic Engineering Times April 23, 1984 p. 15

Sumitomo America (Sunnyvale, California) will introduce 5.25-in **half - height floppy- disc drives** to US OEMs, followed by an IBM-compatible 1.6 Mbyte unit and a 3...

...firm's interest in entering the 3.5-in drive market is being fueled by **Apple Computer** 's commitment to the drive for its Macintosh and **Lisa computers** .

20/3,K/20 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2002 The Gale group. All rts. reserv.

02654908 SUPPLIER NUMBER: 03583287 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Apple cart; the 16-bit Apple IIx; Apples On-Line.
Linzmayr, Owen W.
Creative Computing, v11, p167(2)
Jan, 1985
ISSN: 0097-8140 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1824 LINE COUNT: 00135

... business users and hardcore computerists.
So there you have it; my predictions on the next **Apple computer** , the IIx. To recap, it will be based upon the 16-bit 65816 central processing unit, come standard with 512K of RAM, and use a **half - height 5.25" floppy disk drive** --and it will have slots. As far as the design for the case, that will...

20/3,K/21 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2002 CMP Media, LLC. All rts. reserv.

00630327 CMP ACCESSION NUMBER: EBN19890313S3113
Motorola Inc. is preparing to introduce later this spring a 32-bit generation of single-chip microcontrollers that is compati... (641)
,14p
ELECTRONIC BUYERS' NEWS, 1989, n 641, 6
PUBLICATION DATE: 890313
JOURNAL CODE: EBN LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: 641PG6D
WORD COUNT: 1006

... C.B.L.Imprimis Technology has been awarded a \$15 million OEM contract to supply **Apple Computer** with its 160- megabyte Wren V **half - height 5-1/4-in. Winchester disk drive** .

Apple is using the drive, which has an average seek time of 18 milliseconds, in...

24/3,K/1 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
(c) 2002 ProQuest Info&Learning. All rts. reserv.

01737982 03-88972

Low-cost PCs offer surprising power

Kempfer, Lisa

Computer-aided Engineering v17n12 PP: 48-56 Dec 1998

ISSN: 0733-3536 JRNL CODE: CAE

WORD COUNT: 3559

...TEXT: plastic. The DVD driver features an advanced laser that can pack more data into the **same space** as the laser on a CD-ROM. The DVD driver changes the intensity of its...

... not on the market yet, but look out for the current single-sided discs to **replace** floppy **discs** . DVD **drivers** generally come with the \$ 2 ,200+computers from Compaq, Dell, Gateway, HP, IBM, and Micron Electronics.

Sidebar:

Expansion slots. Currently...

24/3,K/2 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02258706 SUPPLIER NUMBER: 53531391 (USE FORMAT 7 OR 9 FOR FULL TEXT)

*****USB Hot Ticket At MacWorld - Roundup 01/06/99.**

Newsbytes, NA

Jan 6, 1999

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1032 LINE COUNT: 00081

TEXT:

...and of functionality. USB makes sense, say some analysts, since an iMac computer lacks a **3 .5-inch floppy disk drive** . That has made USB a prince of the show, and Apple made iMac systems available...

...ColorSync technology. As a result, the iMac display is calibrated to a fixed standard color "**space**" with **identical** color characteristics on every iMac. That degree of standardizing may not seem important to spreadsheet...

...the Web at <http://www.sandisk.com> . Iomega's USB Zip Drive Iomega showed hot **swappable** , USB connected clear plastic Zip drive for iMac or Windows 98 computers. The drives use...

...umax.com . Interex Shows Current and Future Products Interex displayed a USB dual-port internal **upgrade** device. A spokesperson told Newsbytes the firm's USB line also includes a four-port...

24/3,K/3 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

01208744 SUPPLIER NUMBER: 06126002 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Systems. (new microcomputers from Wang Laboratories Inc. and Hertz Computer Corp.; Tech Releases) (product announcement)

PC Tech Journal, v5, n10, p30(1)

Oct, 1987

DOCUMENT TYPE: product announcement ISSN: 0738-0194 LANGUAGE:

ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 287 LINE COUNT: 00021

TEXT:

...microprocessor. Both systems are bundled with MS-DOS 3.2 and

Microsoft Windows, use the **same** eight- slot chassis, and come standard with a 1.2MB diskette **drive** , a **disk** controller that can support **two** hard- **disk** **drives** , and a multimode video controller that supports Hercules monochrome graphics and IBM CGA and EGA modes. The 80286 system can be **upgraded** to the 80386 system simply by **replacing** the system board. A PC 280 and 380 can become a full-function VS workstation...

24/3,K/4 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.

02903920 Supplier Number: 45904108 (USE FORMAT 7 FOR FULLTEXT)
IBM RAID PLAYS MAJOR ROLE IN CLIENT/SERVER COMPUTING
Data Storage Report, pN/A
Nov 1, 1995
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 223

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...array of independent disks. The major building block of these RAID systems are high-capacity **3 .5-in. disk drives** . One company that has moved aggressively in new RAID technology is IBM Storage System Division...

...storage products for use in IBM System/390 mainframe environments. Using IBM's high-density **3 .5-inch 4 GB disk drives** , the array stores twice as much information in the **same space** as the original system. This doubled capacity reduces floor-space, cooling and electrical requirements by...

...reconstruction" capability that provides an alternate choice for disk drive failure protection; and A seamless **upgrade** path that allows customers to intermix RAMAC 2 storage drawers in existing RAMAC racks as...

24/3,K/5 (Item 1 from file: 610)
DIALOG(R)File 610:Business Wire
(c) 2002 Business Wire. All rts. reserv.

00392844 20001024298B0086 (USE FORMAT 7 FOR FULLTEXT)
nStor Signs Victor Data Systems, Ltd. To Multi-Million Dollar Contract; Subsidiary of JVC to Integrate nStor Solutions for Asian Market
Business Wire
Tuesday, October 24, 2000 13:14 EDT
JOURNAL CODE: BW LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 796

...and NexStor 802F

The storage NexStor 3150 and NexStor 802F solutions packs an unprecedented eight **disk drives** into less than **3 1/2 inches** (2U) of data center rack space, making it the smallest enterprise-level storage system...

...2U enclosure for standard 19-inch racks, yielding almost twice the storage capacity in the **same space** as competitive alternatives. The NexStor 3150 is a storage solution that integrates Fibre Channel RAID...
...3150/802F provides the utmost in reliability and fault-tolerance. It features nStor's hot- **swappable** loop resiliency circuit (LRC) cards that handle Fibre Channel re-timing and clock recovery on...

...over the Fibre Channel interface. Other features include dual power cords, as well

as
hot- **swappable** drives, fans and power supplies. The NexStor 3150 also
features
hot- **swappable** , active/active Fibre Channel RAID controllers.

About Victor Data Systems Company, Ltd.

Victor Data Systems...

24/3,K/6 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

02339457

Firm invents device to back up PC data
Sun-Sentinel (Fort Lauderdale, FL) November 1, 1989 p. D3
ISSN: 0744-8139

... a backup tape-drive system for PC networks. The single palm-sized tape cartridge could **replace** some of the floppy diskds now used to back up data in a system. Core...

... The tape drive that reads and records on the cartridges can be used in the **same space** in which a 3.5-inch floppy **disk drive** fits. The company, which will formally announce the product on 11/13/89, expects the ...

24/3,K/7 (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01709900

NEW WANG PCs: VS WORKSTATION PLUS IBM COMPATIBLE.
NEWS RELEASE May 27, 1987 p. 12

... Windows is bundled with both systems; * hardware -- the PC 280 and PC 380 use the **same 8- slot chassis**' an **upgrade** from one to the other will be accomplished by simply **replacing** the 80286 system board with the 80386 system board; the same monitors, keyboards, option cards...

...standard with a 1.2MB diskette drive, a disk controller that can support up to **two diskette drives** and **two hard disk drives** , and a multi-mode video controller that supports Hercules monochrome graphics, Color Graphics Adapter (CGA...
?

28/3,K/1 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01814706

**MAGNESYS DISCLOSES STRATEGIC PLANS TO FURTHER EXTEND MEMORY SUBSYSTEM
PRODUCTS INTO INDUSTRIAL MICROCOMPUTER MARKETPLACE**
News Release October 5, 1987 p. 1

... Their products encompass standard buses such as SCSI, STD, MultiBus and VME. The Magnesys Data **Cartridge** (TM) and Magnesys Electronic Drive (TM) solid-state memory subsystem products are positioned for compatibility ...

... data. Unlike other non-volatile magnetic media, MBM does not wear out. Magnesys products directly **replace** 3.5- and 5.25-inch **half - height** floppy and Winchester **disk drives** and tape systems, fitting into the exact **space** with the **identical** power connector. The products serve the rapidly growing market for file-structured memory in rugged...

28/3,K/2 (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01799672

**MAGNESYS INTRODUCES "PLUG N' PLAY" EVALUATION KIT FOR SPEEDY SYSTEM
INTEGRATION OF MAGNETIC BUBBLE MEMORY SUBSYSTEM**
News Release July 10, 1987 p. 1

Magnesys announced an evaluation kit for its Magnesys Data **Cartridge** (TM) and Magnesys Electronic Drive (TM) solid-state memory subsystem, removable non-volatile memory for...

...Magnesys Evaluation Kit is a complete memory storage subsystem including a 360K Byte Standard Data **Cartridge** (TM). one 5.25-inch Electronic Drive(TM); a PC Bus Host Adapter; Firmware Device...

... cost-effective storage memory which is portable, compact and permanent. The Magnesys products are direct **replacements** for 3.5- and 5.25-inch **half - height** floppy and Winchester **disk drive**, and tape systems, or conventional memory. Magnesys' Electronic Drive fits into the exact **space** and has the **identical** power connector as a floppy or Winchester drive. An embedded SCSI chip and supporting firmware...

... of micro- and minicomputer. The subsystem incorporates all of the control logic for either Data **Cartridge**, plus write protect capability to prevent inadvertent erasure, an activity LED and pushbutton ejection.

Full...

File 348:EUROPEAN PATENTS 1978-2002/May W02

(c) 2002 European Patent Office

File 349:PCT FULLTEXT 1983-2002/UB=20020516,UT=20020509

(c) 2002 WIPO/Univentio

Set	Items	Description
S1	29530	DIS??? (3N) DRIVE?
S2	3605	S1 (5N) (TWO OR 2)
S3	3192	S1 (5N) (THIRD OR THREE OR 3 OR ADDITIONAL)
S4	330387	SWAP? OR RECONFIG? OR REPLAC? OR UPGRAD?
S5	78200	MODULAR? OR INTERCHANG?
S6	309554	OCCUP? OR SITTING OR INSTALL?
S7	34186	(SAME OR IDENTICAL) (3N) (SLOT?? OR SPAC? OR LOCATION?)
S8	6	S1 (5N) (HALF OF FULL OR DOUBLE) (3N) FORM?
S9	87	S1 (5N) (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S10	38957	CARTRIDGE? OR (MAGAZINE? OR STORAGE) (3N) COMPONENT??
S11	204	S1 (5N) (TWIGGY OR THIN OR SKINNY OR NARROW?)
S12	2823	(LISA? OR APPLE) (3N) COMPUTER?
S13	6	(S8 OR S9) (S) S4
S14	0	S13 (S) S7
S15	0	S4 (S) S11 (S) (HALF OR FULL OR DOUBLE) (3N) (WIDTH? OR HEIGHT?)
S16	0	S12 (S) (S8 OR S9)
S17	268	(S2 OR S3) (S) S4
S18	4	S17 (S) S7
S19	4	S18 NOT S13
S20	10	(S8 OR S9) (S) S10
S21	0	S20 (S) S4
S22	0	S20 (S) S7
S23	10	S20 NOT (S13 OR S18)

13/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00683629

Hot-swappable multi-cartridge docking module.
Ankoppelmodul fur austauschbaren Speicher.
Module d'accouplement pour memoires echangeables.

PATENT ASSIGNEE:

TEAC CORPORATION, (598570), 3-7-3, Naka-cho, Musashino-shi Tokyo, (JP),
(applicant designated states: DE;GB)
Pont Peripherals Corporation, (1867590), 912 West Maude Avenue,
Sunnyvale, California 94086, (US), (applicant designated states: DE;GB)

INVENTOR:

Kaczeus, Steven L., 1319 Chandon Court,, San Jose California 95125, (US)
McKnight, Thomas, 15860B Winchester Boulevard, Los Gatos California 95030
, (US)
Edwards, Roy J., 215 Montclair Road, Los Gatos California 95030, (US)

LEGAL REPRESENTATIVE:

Cross, Rupert Edward Blount et al (42891), BOULT, WADE & TENNANT 27
Furnival Street, London EC4A 1PQ, (GB)

PATENT (CC, No, Kind, Date): EP 653759 A2 950517 (Basic)
EP 653759 A3 960313

APPLICATION (CC, No, Date): EP 94308357 941111;

PRIORITY (CC, No, Date): US 152207 931115

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS: G11B-033/12; G06F-013/40;

ABSTRACT WORD COUNT: 73

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	217
SPEC A	(English)	EPAB95	3770
Total word count - document A			3987
Total word count - document B			0
Total word count - documents A + B			3987

...ABSTRACT A docking module for removable disk drives provides, in one embodiment, space for two such **disk drives** within a standard **half - height** bay. The docking module provides cammed insertion and removal together with hot **swappability** of disk drives. Alternative embodiments provide ten or more **disk drives** at a density of two drives per **half - height** bay. (see image in original document) ...

13/3,K/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00361991

Disk drive spindle motor.
Spindel-Motor fur eine Platteneinheit.
Moteur d'axe pour unite de disque.

PATENT ASSIGNEE:

RIGIDYNE CORPORATION, (1070010), 2655 Park Center Drive, Simi Valley
California 93065, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Krum, Richard Gene, 688 Oak Shadow View Place, Thousand Oask California
91320, (US)
Milanes, Eddy Juan, 4243 Roxbury Street, Simi Valley California 93063,
(US)
Moir, Michael Bruce, 3337 Prairie Court, Newbury Park California 91320,
(US)

LEGAL REPRESENTATIVE:

Caro, William Egerton et al (29141), J. MILLER & CO. Lincoln House
296-302 High Holborn, London WC1V 7JH, (GB)

PATENT (CC, No, Kind, Date): EP 339765 A2 891102 (Basic)

EP 339765 A3 910206
APPLICATION (CC, No, Date): EP 89301685 890222;
PRIORITY (CC, No, Date): US 173619 880325
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G11B-019/20; H02K-021/22; G11B-033/14;
H02K-021/22;
ABSTRACT WORD COUNT: 121

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1010
SPEC A	(English)	EPABF1	3852
Total word count - document A			4862
Total word count - document B			0
Total word count - documents A + B			4862

...SPECIFICATION into a computer as an original equipment item, or as an after market item to **replace** or up-grade an original disk drive unit. Specifically, disk drive units have been manufactured...

...vertical dimension of about 41 mm (1.625 inch) to fit within a so-called " **half height** " profile.

For any specific **disk drive** unit, the total memory storage capacity is related in large degree to the number of...

13/3,K/3 (Item 1 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00494208 **Image available**

A THERMAL PRINTER

IMPRIMANTE THERMIQUE

Patent Applicant/Assignee:

IMAGIK LIMITED,
STRICKLAND James Gerald,
SIMMONDS John Andrew,

Inventor(s):

STRICKLAND James Gerald,
SIMMONDS John Andrew,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9925560 A1 19990527

Application: WO 98GB3414 19981113 (PCT/WO GB9803414)

Priority Application: GB 9723967 19971114

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV

MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG

US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT

BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA

GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 16160

Fulltext Availability:

Detailed Description

Detailed Description

... contained within a space in the computer which may otherwise be used for a conventional **full height disk drive** which could be for example, a CD ROM, floppy **disk** or hard **disk drive** . This provides the advantage that a free **full height** slot in a computer can be **replaced** by a thermal printer embodying the invention.

The invention also encompasses a thermal printing system...

13/3,K/4 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00244427 **Image available**

FETAL MONITORING SYSTEM

SYSTEME DE SURVEILLANCE DE FOETUS

Patent Applicant/Assignee:

 HOMECARE DIAGNOSTIC SERVICES,

Inventor(s):

 GROSSMAN Avram,

 MEREL Deirdre,

Patent and Priority Information (Country, Number, Date):

 Patent: WO 9318710 A1 19930930

 Application: WO 93US2868 19930325 (PCT/WO US9302868)

 Priority Application: US 92857957 19920326

Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 5772

Fulltext Availability:

 Detailed Description

Detailed Description

... for the storage of patient data. The storage device 31
 is a 3.25 inch **half - height** floppy **disk drive** that can
 access floppy disks with a data storage capacity of UD to
 1,44...

...which is inserted'

 into disk drive 31,

 The floppy disk drive unit 31 may be **replaced**

 with a Personal Computer Memory Card (PCMC) compatible
 storage card, The external media controller 25...

13/3,K/5 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00190398 **Image available**

MEMORY SYSTEMS PACKAGE

MODULE DE SYSTEMES DE MEMORISATION

Patent Applicant/Assignee:

 MOST RESEARCH CORPORATION,

Inventor(s):

 VITULLO Ronald G,

Patent and Priority Information (Country, Number, Date):

 Patent: WO 9107745 A1 19910530

 Application: WO 90US6677 19901109 (PCT/WO US9006677)

 Priority Application: US 89750 19891113

Designated States: AT AT AU BB BE BF BG BJ BR CA CF CG CH CH CM DE DE DK DK

 ES ES FI FR GA GB GB GR HU IT JP KP KR LK LU LU MC MG ML MR MW NL NL NO

 RO SD SE SE SN SU TD TG

Publication Language: English

Fulltext Word Count: 1787

Fulltext Availability:

 Detailed Description

Detailed Description

... of personal computers has created a
 torrent of devices operating as standardized mechanism each
 accommodating **replaceable** components for accomplishing a
 variety of functions. In the memory area, a **half height** 5
 1/4 inch **disk drive** mechanism has become a standard form
 factor which most manufacturers now attempt to emulate, To
 upgrade existing personal computers for large memory
 capacity, particularly with **replaceable** media, it is thus

incumbent upon manufacturers intent on capitalizing on
existing units to fit...

...standard from factors,

The most recent innovation in memory systems
however require larger volumes. Thus, **replaceable** magneto
optical technology, although employing 3 1/2 inch media,
requires a large volume for...

13/3,K/6 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00185007 **Image available**

ARCHITECTURE FOR 2-1/2 INCH DIAMETER SINGLE DISK DRIVE
ARCHITECTURE D'UNITE DE DISQUE INDIVIDUEL D'UN DIAMETRE DE 2,5 POUCES

Patent Applicant/Assignee:

CONNER PERIPHERALS INC,

Inventor(s):

STEFANSKY Frederick Mark,

ANDREWS Michael Kenneth,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9102349 A1 19910221

Application: WO 90US4024 19900718 (PCT/WO US9004024)

Priority Application: US 89944 19890731; US 89108 19891002; US 90960
19900412

Designated States: AT BE CH DE DK ES FR GB IT JP KR LU NL SE

Publication Language: English

Fulltext Word Count: 11685

Fulltext Availability:

Claims

Claim

... a housing having a length approximately equal to
the width of a three and one- **half** inch (3.511) form
factor **disk drive** and a **width** approximately equal to
one- **half** of the length of a 3.511 form factor disk drive;
storage means, provided in...

?

19/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

01108523

Method and apparatus for moving a carriage assembly from an initial position to a target position
Verfahren und Vorrichtung zum Bewegen einer Wagenanordnung von einer Anfangsposition zu einer Zielposition
Methode et appareil pour déplacer un assemblage de chariot d'une position initiale a une position cible

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (Applicant designated States: all)

INVENTOR:

Getreuer, Kurt Walter, 1115 Golden Hills Rd., Colorado Springs, Colorado 80919, (US)

LEGAL REPRESENTATIVE:

Leone, Mario et al (87922), Societa Italiana Brevetti. Via Carducci, 8, 20123 Milano, (IT)

PATENT (CC, No, Kind, Date): EP 971343 A2 000112 (Basic)

APPLICATION (CC, No, Date): EP 99201549 960125;

PRIORITY (CC, No, Date): US 376882 950125; US 420899 950411

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 724255 (EP 96300540)

INTERNATIONAL PATENT CLASS: G11B-007/085

ABSTRACT WORD COUNT: 188

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200002	1787
SPEC A	(English)	200002	87861
Total word count - document A			89648
Total word count - document B			0
Total word count - documents A + B			89648

...SPECIFICATION move in opposite directions under the influence of the tiller 1-76. The S-shaped slot 1-281 in the right slider 1-73 also opens toward the right outer side...the lens holder 2-14 downward, or farther away from the surface of the optical disc 2-76. By moving the objective lens 2-12 closer to or farther away from the...

19/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00921020

Optical disc system having current monitoring circuit with controller for laser driver and method for operating same
Optisches Plattensystem mit Stromüberwachungsschaltung mit Lasertreibersteuerungseinheit, und Verfahren zu deren Betrieb
Systeme de disque optique avec circuit de surveillance de courant avec dispositif de commande d'un laser, et methode de fonctionnement

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;IE;IT;LI;NL;PT;SE)

INVENTOR:

Crupper, Randolph Scott, 308 High Street, PO Box 731, Palmer Lake, Colorado 80133, (US)

Davis, Marvin Benjamin, 2813 Palmer Park Blvd., Colorado Springs, Colorado 80909, (US)

Getreuer, Kurt Walter, 115 Golden Hills Rd., Colorado Springs, Colorado

80919, (US)
 Grassens, Leonardus Johannes, 19115 Pebble Beach Way, Monument, Colorado
 80132, (US)
 Lewis, David Earl, 14820 Spiritwood Loop, Black Forest, Colorado 80106,
 (US)
 Schell, David Louis, 5307 Borrego Drive, Colorado Springs, Colorado 80918
 , (US)
 LEGAL REPRESENTATIVE:
 Bazzichelli, Alfredo et al (40161), c/o Societa Italiana Brevetti S.p.A.
 Piazza di Pietra, 39, 00186 Roma, (IT)
 PATENT (CC, No, Kind, Date): EP 840309 A2 980506 (Basic)
 EP 840309 A3 990414
 APPLICATION (CC, No, Date): EP 97118099 960118;
 PRIORITY (CC, No, Date): US 376882 950125
 DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE
 RELATED PARENT NUMBER(S) - PN (AN):
 EP 726564 (EP 963003504)
 INTERNATIONAL PATENT CLASS: G11B-011/10; G11B-007/09;
 ABSTRACT WORD COUNT: 115

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9819	2633
SPEC A	(English)	9819	88350
Total word count - document A			90983
Total word count - document B			0
Total word count - documents A + B			90983

...SPECIFICATION 1-136 (Fig. 15A) of the cartridge receiver 1-82 rides in the left vertical slot 1-130 of the base plate 1-46. The left lift pin is longer than...needed to bring the light beam into the desired focus condition with respect to the disc 2 -76. When radial or tracking movement is required to position the objective lens 2-12 beneath the center of a selected track on the optical disc 2 -76, current is applied to the tracking coil 2-16. The current interacts with the...

19/3,K/3 (Item 3 from file: 348)
 DIALOG(R)File 348:EUROPEAN PATENTS
 (c) 2002 European Patent Office. All rts. reserv.

00741338

Connectionless communications system, test method, and intra-station control system

Verbindungsloses Kommunikationssystem, Testmethode und Intra-Station-Steuerungssystem

Systeme de communication sans connection, methode de test et systeme de gestion intra-station

PATENT ASSIGNEE:

FUJITSU LIMITED, (211460), 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa 211, (JP), (applicant designated states: DE;FR;GB)

INVENTOR:

Kobayasi, Yasusi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Watanabe, Yoshihiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Nishida, Hiroshi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Izawa, Naoyuki, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Murayama, Masami, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Abe, Jin, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Uchida, Yoshihiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku, Kawasaki-shi, Kanagawa, 211, (JP)

Yamanaka, Hiromi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,

Kawasaki-shi, Kanagawa, 211, (JP)
 Aso, Yasuhiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Tsuruta, Yoshihisa, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Kato, Yoshiharu, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Kakuma, Satoshi, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Uriu, Shiro, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Samejima, Noriko, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Ishioka, Eiji, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Sekine, Shigeru, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Karakawa, Yoshiyuki, Fujitsu Kyushu Communication, Systems Ltd.,
 Yasudaseimeihakata Bldg., 1-4-4,, Hakataekimae, Hakata-ku, Fukuoka, 812,
 (JP)
 Kagawa, Atsushi, c/o Fujitsu Communication, Systems Ltd., 3-9-18,
 Shinyokohama, Kouhoku-ku, Yokohama-shi, Kanagawa, 222, (JP)
 Nakayama, Mikio, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)
 Kawataka, Miyuki, Fujitsu Limited, 1015, Kamikodanaka, Nakahara-ku,
 Kawasaki-shi, Kanagawa, 211, (JP)

LEGAL REPRESENTATIVE:

Ritter und Edler von Fischern, Bernhard, Dipl.-Ing. et al (9672),
 Hoffmann, Eitle & Partner, Patentanwalte, Arabellastrasse 4, D-81925
 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 700229 A2 960306 (Basic)
 EP 700229 A3 990203

APPLICATION (CC, No, Date): EP 95113111 950821;

PRIORITY (CC, No, Date): JP 94255120 940822

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: H04Q-011/04

ABSTRACT WORD COUNT: 170

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	8491
SPEC A	(English)	EPAB96	164543
Total word count - document A			173034
Total word count - document B			0
Total word count - documents A + B			173034

...SPECIFICATION system. The OMP hardware components (refer to Figure 26)
 are as follows.

- * CPU (including memory), **disk drives** , and a floppy **disk drive**
- * CRT display (used as a graphical user interface (GUI))
- * Keyboard
- * Mouse
- * Hard disk
- * Cartridge tape...the active circuit, then two TAGC values set at DMUX
 0 and DMUX 4 are **swapped** to switch the active and standby circuits.

6.2.4. Monitor of Buffer

Each buffer...slot which has sent back an answer, and that it is not
 mounted for the **slot** which returned no answer.

The firmware performs these processes only for load-recognized slots.

(2...

00156314

SIGNAL PROCESSING APPARATUS AND METHODS

DISPOSITIF ET PROCEDES DE TRAITEMENT DE SIGNAUX

Patent Applicant/Assignee:

HARVEY John C,

Inventor(s):

HARVEY John C,

CUDDIHY James W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8902682 A1 19890323

Application: WO 88US3000 19880908 (PCT/WO US8803000)

Priority Application: US 8796 19870911

Designated States: AT AU BE BJ BR CF CG CH CM DE DK FI FR GA GB GB HU IT JP

KP LK LU MC MG ML MR MW NL NO RO SE SN SU TD TG

Publication Language: English

Fulltext Word Count: 161690

Fulltext Availability:

Claims

Claim

... that subscriber station

computers use to process data. At present, most computers are somecalled 11thirty@ **two** bit machines" that process 15 information in four-byte data words, and some high precision...data communications, the preferred normal transmission location for SPAM signals is in

4

35 the **same** location as the conventional information* More prezisely, conventional print of data information is transmitted in SPAM...apparatus to search just one unchanging portion of said transmission to detect commands. Having the **same** fixed location for cadence information enables said decoder apparatus to distinguish all command information in said transmission...While said this-message-addressed-to-205 information and said execute at-205 information are **identical** in image, they bear different names in this specification because they invoke 15 different controlled...apparatus of signal processor, 200, to record said monitor record at recorder, 16, and to **replace** said monitor record at 35 buffer/comparator, 14, with a new monitor record based on...

?

23/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.

00578939

Picker apparatus

Greifvorrichtung

Dispositif de prehension

PATENT ASSIGNEE:

Hewlett-Packard Limited, (402422), Cain Road, Bracknell, Berkshire RG12
1HN, (GB), (applicant designated states: DE;FR;GB;IT;NL)

INVENTOR:

Williams, Phillip Roy, 8 Ellicks Close, Bradley Stoke North Bristol, BS12
OES, (GB)

LEGAL REPRESENTATIVE:

Lawman, Matthew John Mitchell et al (84551), Hewlett-Packard Limited, IP
Section, Building 2, Filton Road, Stoke Gifford, Bristol BS12 6QZ, (GB)

PATENT (CC, No, Kind, Date): EP 601247 A1 940615 (Basic)

EP 601247 B1 981104

APPLICATION (CC, No, Date): EP 92311221 921209;

PRIORITY (CC, No, Date): EP 92311221 921209

DESIGNATED STATES: DE; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS: G11B-015/68;

ABSTRACT WORD COUNT: 160

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9845	339
CLAIMS B	(German)	9845	378
CLAIMS B	(French)	9845	420
SPEC B	(English)	9845	2731
Total word count - document A			0
Total word count - document B			3868
Total word count - documents A + B			3868

...SPECIFICATION an increase is by the use of a tape autochanger system, in
which any selected **cartridge** can be automatically loaded into a DDS
record/replay mechanism from a magazine housing several **cartridges** ;
such an autochanger, for use with a six- **cartridge** magazine, is
described in co-pending European patent application No. 92 3 04 388.9...

...can be accommodated within the dimensions ('form factor') occupied by a
standard 5 1/4" **full - height disk drive** for a desktop personal
computer.

An important component of an autochanger is the so-called...

23/3,K/2 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00519492 **Image available**

**OPTICAL DATA STORAGE SYSTEM UTILIZING POLARIZATION MAINTAINING OPTICAL
FIBER**

**SYSTEME DE MEMOIRE INFORMATIQUE OPTIQUE UTILISANT UNE FIBRE OPTIQUE DE
MAINTIEN DE LA POLARISATION**

Patent Applicant/Assignee:

SEAGATE TECHNOLOGY INC,

Inventor(s):

WILDE Jeffrey P,
TSELIKOV Alexander,
ZHANG Yongwei,
GRAY George R,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9950844 A1 19991007

Application: WO 99US7055 19990330 (PCT/WO US9907055)

Priority Application: US 9879903 19980330; US 9888192 19980605; US

98108398 19981113; US 98111470 19981209; US 99283896 19990330

Designated States: CN JP KR SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
NL PT SE

Publication Language: English

Fulltext Word Count: 7447

Fulltext Availability:

Detailed Description

Detailed Description

... form factor (1.625 inch) MO disk drive 700 may include a removable MO disk **cartridge** portion 710 and two fixed internal spinning MO disks 107. By providing the removable MO disk **cartridge** portion 710, the fixed internal and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 710 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 710 allows for very convenient and high speed back-up storage of the internal...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 710 and system files and software applications on the internal MO spinning disks...

...any number of spinning MO disks 107 and/or any number of removable MO disk **cartridge** portions 710.

Although, in one embodiment, information is selectively conveyed to and from a laseroptics...

23/3,K/3 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2002 WIPO/Univentio. All rts. reserv.

00519491 **Image available**

OPTICAL DATA STORAGE SYSTEM WITH MEANS FOR REDUCING NOISE FROM SPURIOUS REFLECTIONS

SYSTEME DE MEMORISATION DE DONNEES OPTIQUES GRACE A UN DISPOSITIF DE REDUCTION DE BRUIT PROVENANT DE REFLEXIONS PARASITES

Patent Applicant/Assignee:

SEAGATE TECHNOLOGY LLC, 920 Disk Drive, Scotts Valley, CA 95067-0360, US,
US (Residence), US (Nationality)

Inventor(s):

WILDE Jeffrey P, 18555 Mountain View Avenue, Los Gatos, CA 95030, US,
TSELIKOV Alexander, 3803 Darwin Drive #265, Fremont, CA 94555, US,
ZHANG Yongwei, 1504 Woodmeadow Court, San Jose, CA 95131, US,
IZRAELIAN Viatcheslav, 5950 Bathurst Street #903, North York, Ontario M2R
1Y9, CA,

HEANUE John F, 5468 Felter Road, San Jose, CA 95132, US,
GRAY George R, 14180 Flagstone Terrace, Apple Valley, MN 55124, US,
HURST Jerry E Jr, 1784 Marcy Lynn Court, San Jose, CA 95124, US,

Legal Representative:

DEMPSTER Shawn B (agent), Seagate Technology, Inc., Intellectual Property
Dept. - SHK2LG, 1280 Disc Drive, Shakopee, MN 55379-1863, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9950843 A1 19991007

Application: WO 99US6982 19990330 (PCT/WO US9906982)

Priority Application: US 9879903 19980330; US 9888192 19980605; US
98124812 19980729; US 98108398 19981113; US 98111470 19981209; US
99281753 19990330

Designated States: CN JP KR SG

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Filing Language: English

Fulltext Word Count: 11043

Fulltext Availability:

Detailed Description

Detailed Description

... equivalent volume according to conventional

19

In an alternative embodiment shown in Figure 5b, the **half - height** forrii factor MO **disk drive** 500 may include a removable MO disk **cartridge** portion 510 and two fixed internal MO disks 107. By providing the removable MO disk **cartridge** portion 510, the fixed internal and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 510 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 510 allows for very convenient and high speed back-up storage of the internal...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 510 and system files and software applications on the internal MO spinning...

...and/or any number of MO disks 107 within any number of removable MO disk **cartridge** portions.

In accordance with

23/3,K/4 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00519490 **Image available**

LOW-BIREFRINGENCE OPTICAL FIBER FOR USE IN AN OPTICAL DATA STORAGE SYSTEM
FIBRE OPTIQUE A FAIBLE BIREFRINGENCE POUR SYSTEME OPTIQUE DE STOCKAGE DE
DONNEES

Patent Applicant/Assignee:

SEAGATE TECHNOLOGY INC,

Inventor(s):

WILDE Jeffrey P,
HURST Jerry E Jr,
HEANUE John F,
IZRAELIAN Viatcheslav,
TSELIKOV Alexander,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9950842 A1 19991007

Application: WO 99US6471 19990326 (PCT/WO US9906471)

Priority Application: US 9879903 19980330; US 9888192 19980605; US
98124812 19980729

Designated States: CN JP KR SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
NL PT SE

Publication Language: English

Fulltext Word Count: 4978

Fulltext Availability:

Detailed Description

Detailed Description

... when conveyed by polarizationmaintaining optical fiber.

In an alternative embodiment shown in Figure 5b, the **half - height** form factor MO **disk drive** 500 may include a removable MO disk **cartridge** portion 510 and two fixed internal MO disks 107. By providing the removable MO disk **cartridge** portion 510, the fixed internal and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 510 for

15

23/3,K/5 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00457954

THIN-FILM ELECTRO-MAGNETIC COIL DESIGN FOR USE IN A FLYING MAGNETO-OPTICAL HEAD

STRUCTURE DE BOBINE ELECTROMAGNETIQUE A COUCHE MINCE POUR TETE MAGNETO-OPTIQUE FLOTTANTE

Patent Applicant/Assignee:

READ-RITE CORPORATION,
QUINTA CORPORATION,
BISCHOFF Peter G,
MCDANIEL Terry,
WANG Yugang,

Inventor(s):

BISCHOFF Peter G,
MCDANIEL Terry,
WANG Yugang,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9848418 A1 19981029

Application: WO 98US6651 19980402 (PCT/WO US9806651)

Priority Application: US 97844167 19970418; US 9819225 19980204

Designated States: DE GB JP KR SG US US

Publication Language: English

Fulltext Word Count: 16987

Fulltext Availability:

Detailed Description

Detailed Description

... alternative embodiment, with a MO disk-to-disk spacing of approximately 0.182 inch, the **half - height** form factor MO system (or **disk drive**) 1600 may include a removable MO disk **cartridge** portion 151 0 and two fixed MO disks 107. By providing the removable MO disk **cartridge** portion 151 0, the fixed and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 151 0 for distribution to other computer systems.

In addition, the removable MO disk...

23/3,K/6 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00418931 **Image available**

SYSTEM AND METHOD OF USING OPTICAL FIBERS IN A DATA STORAGE AND RETRIEVAL SYSTEM

SYSTEME ET PROCEDE D'UTILISATION DE FIBRES OPTIQUES DANS UN SYSTEME DE STOCKAGE ET D'EXTRACTION DE DONNEES

Patent Applicant/Assignee:

QUINTA CORPORATION,

Inventor(s):

WILDE Jeffrey P,
HURST Jerry E Jr,
HEANUE John F,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9809392 A2 19980305

Application: WO 97US15163 19970827 (PCT/WO US9715163)

Priority Application: US 9625801 19960827; US 96771057 19961220

Designated States: CN JP KP SG AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English
Fulltext Word Count: 7577

Fulltext Availability:
Detailed Description

Detailed Description

... is permitted in an equivalent volume of the prior art.

In an alternative embodiment, the **half - height** form factor MO **disk drive** 700 may include a removable MO disk **cartridge** portion 710 and two fixed internal spinning MO disks 107. By providing the removable MO disk **cartridge** portion 710, the fixed internal and removable combination permits external information to be...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 710 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 710 allows for very convenient and high speed back-up storage of...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 710 and system files and software applications on the internal MO spinning disks 107...

...and/or any number of MO disks 107 within any number of removable MO disk **cartridge** portions 710.

In another alternative embodiment, information may be conveyed between a set...

23/3,K/7 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00418828 **Image available**

OPTICAL HEAD USING MICRO-MACHINED ELEMENTS TETE OPTIQUE UTILISANT DES ELEMENTS MICRO-USINES

Patent Applicant/Assignee:

QUINTA CORPORATION,

Inventor(s):

WILDE Jeffrey P,
DAVIS Joseph E,
HURST Jerry E Jr,
HEANUE John F,
PETERSEN Kurt,
McDANIEL Terry,
DRAKE Joseph,
DRAZAN Jeff,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9809289 A1 19980305

Application: WO 97US15215 19970827 (PCT/WO US9715215)

Priority Application: US 9625801 19960827; US 97823422 19970324

Designated States: CN JP KP SG AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL
PT SE

Publication Language: English

Fulltext Word Count: 18937

Fulltext Availability:
Detailed Description

Detailed Description

... at least .182 inches.

In an alternative embodiment shown in Figure 21 b, the **half - height** form factor MO **disk drive** 800 may include a removable MO disk **cartridge** portion 810 and two fixed internal MO disks 107. By providing

the removable MO disk **cartridge** portion 810, the fixed internal and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 810 for 2 5 distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 810 allows for very convenient and high-speed back-up storage of the internal...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 810 and system files and software applications on the internal MO spinning disks 107...

...and/or any number of MO disks 107 within any number of removable MO disk **cartridge** portions 1510.

The present invention does not necessarily require use of rotary actuator arms, for...

23/3,K/8 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00418827 **Image available**

OFFSET OPTICS FOR USE WITH OPTICAL HEADS

OPTIQUE EXCENTREE A UTILISER AVEC DES TETES OPTIQUES

Patent Applicant/Assignee:

QUINTA CORPORATION,

Inventor(s):

DAVIS Joseph E,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9809288 A1 19980305

Application: WO 97US15214 19970827 (PCT/WO US9715214)

Priority Application: US 9625801 19960827; US 97798912 19970212

Designated States: CN JP KP SG AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL
PT SE

Publication Language: English

Fulltext Word Count: 7482

Fulltext Availability:

Detailed Description

Detailed Description

... is permitted in an equivalent volume of the prior art.

In an alternative embodiment, the **half - height** form factor MO **disk drive** 800 may include a removable MO disk **cartridge** portion 810 and two fixed internal MO disks 107. By providing the removable MO disk **cartridge** portion 8 1 0, the fixed internal and removable combination permits external information to be...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 8 1 0 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 8 1 0 allows for very convenient and high speed back-up storage of...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 8 1 0 and system files and software applications on the internal MO spinning...

...and/or any number of MO disks 107 within any number of removable MO disk **cartridge** portions 8 10.

The present invention does not necessarily require use of rotary actuator arms...

23/3,K/9 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00418825 **Image available**

OPTICAL SYSTEM AND METHOD USING OPTICAL FIBERS FOR STORAGE AND RETRIEVAL OF INFORMATION

SYSTEME OPTIQUE ET PROCEDE DANS LESQUELS DES FIBRES OPTIQUES SONT UTILISEES POUR LE STOCKAGE ET L'EXTRACTION D'INFORMATIONS

Patent Applicant/Assignee:

QUINTA CORPORATION,

Inventor(s):

WILDE Jeffrey P,
DAVIS Joseph E,
HURST Jerry E Jr,
HEANUE John F,
DRAZAN Jeff,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9809286 A1 19980305

Application: WO 97US15165 19970827 (PCT/WO US9715165)

Priority Application: US 9625801 19960827; US 96745095 19961107

Designated States: CN JP KP SG AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 7266

Fulltext Availability:

Detailed Description

Detailed Description

... form factor (1.625 inch) MO disk drive 700 may include a removable MO disk **cartridge** portion 7 1 0 and two fixed internal spinning MO disks 107. By providing the removable MO disk **cartridge** portion 7 1 0, the fixed internal and removable combination permits external information to be removable MO disk **cartridge** portion 710 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 7 1 0 allows for very convenient and high speed back-up storage of the...

...internal and removable combination also permits storage of data files on the removable MO disk **cartridge** portion 7 1 0 and system files and software

12

applications on the internal MO...

...any number of spinning MO disks 107 and/or any number of removable MO disk **cartridge** portions 710.

Although, in the preferred embodiment information is selectively conveyed to and from a...

23/3,K/10 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.

00418819 **Image available**

SINGLE-FREQUENCY LASER SOURCE FOR OPTICAL DATA STORAGE SYSTEM

SOURCE LASER MONOFREQUENCE POUR SYSTEME DE STOCKAGE DE DONNEES OPTIQUE

Patent Applicant/Assignee:

QUINTA CORPORATION,

Inventor(s):

WILDE Jeffrey P,
HURST Jerry E Jr,
HEANUE John F,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9809280 A1 19980305

Application: WO 97US15212 19970827 (PCT/WO US9715212)

Priority Application: US 9625801 19960827; US 97883320 19970626

Designated States: CN JP KP SG AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL

PT SE

Publication Language: English

Fulltext Word Count: 5795

Fulltext Availability:

Detailed Description

Detailed Description

... used with conventional FabryPerot diode lasers.

In an alternative embodiment shown in Figure 9b, the **half - height** form factor MO **disk drive** 908 may include a removable MO disk **cartridge** portion 910 and two fixed internal MO disks 107. By providing the removable MO disk **cartridge** portion 910, the fixed internal and removable combination permits external information to be efficiently delivered...

...disks 107. The copied information may, subsequently, be recorded back onto the removable MO disk **cartridge** portion 910 for distribution to other computer systems. In addition, the removable MO disk **cartridge** portion 910 allows for very convenient and high speed back-up storage of the internal removable combination also permits storage of data files on the removable MO disk **cartridge** portion 910 and system files and software applications on the 10 internal MO spinning disks...

...and/or any number of MO disks 107 within any number of removable MO disk **cartridge** portions.

The present invention does not necessarily require use of rotary actuator arms, for example...

?

The Legacy of the Apple Lisa Personal Computer: An Outsider's View

© Copyright 1993 - David T. Craig

10700 Academy Road NE, Apt. 922, Albuquerque, New Mexico 87111 (505) 299-0308
736 Edgewater, Wichita, Kansas 67230 (316) 733-0914

16 February 1993

Coverted to HTML by Jeffery Walker
Jeff@OHInter.net
On 5/11/97

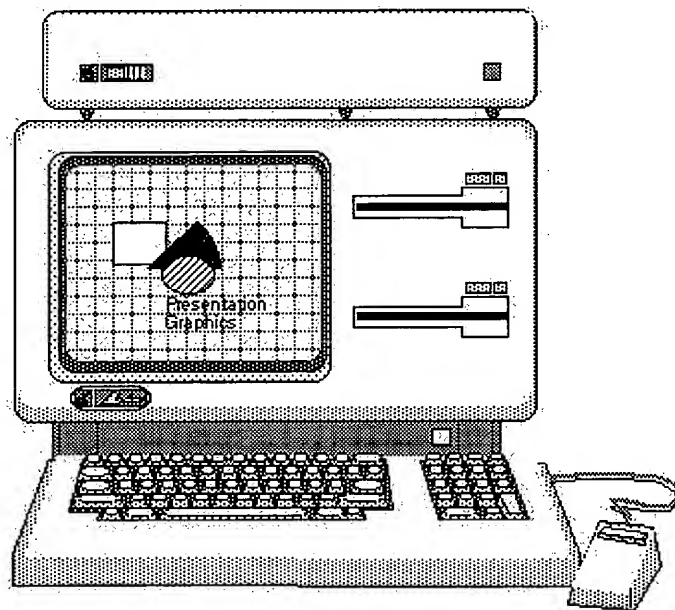


TABLE OF CONTENTS

Introduction
<u>A Little Bit of History</u>
<u>Lisa Technology</u>
<u>Macintosh XL, MacWorks, Lisa-to-Mac Migration Kit</u>
<u>Macintosh: Back to the Future</u>
<u>Macintosh System 7 Lisa Dedication</u>
<u>References</u>
<u>Summary</u>

INTRODUCTION

This paper is an attempt by a long time Lisa user to clarify the significance of the Apple Lisa personal computer for the computing industry. The audience of this paper is anyone who has an interest in innovative computing technology and wants to learn a little about Apple Computer's brief foray into this area via the Lisa computer.

This paper hopes to show why the Lisa was significant in its time and how some of what was called "Lisa Technology" is slowly migrating to other computer systems, mainly the Apple Macintosh computer series.

The author has never worked for Apple and as such is not privy to any insider secrets about this machine. All facts contained herein were obtained from Apple's cornucopia of Lisa literature, Apple's Macintosh literature, discussions with other Lisa owners, and my personal involvement with and close observations of both machines since 1984.

This paper is loosely based upon the excellent article "The Legacy of the Lisa" (MacWorld magazine, Sep. 1985) as written by Mr. Larry Tesler, one of the Lisa's main designers and currently a key technologist at Apple Computer.

A LITTLE BIT OF HISTORY

Apple began developing the Lisa computer in 1979. The Lisa charter was to build a revolutionary computer that was truly easy to use and thereby mitigate the limitations of existing computers. Developing a computer which was an order of magnitude easier to use than traditional computers required several major departures.

The name "Lisa" has always been rather enigmatic for most computer users, including Lisa owners. To set the story straight (as far as I know) here are the facts behind the name "Lisa". Officially, Apple states that "Lisa" stood for Local Integrated Software Architecture. Unofficially, "Lisa" has been associated with the name of a child fathered by one of the Lisa designers (this may be the same person who is now head of Next Computer, Inc., Mr. Steve Jobs).

The Lisa had several design goals:

- o Be intuitive,
- o be consistent,
- o conform to the ways people actually work,
- o have enough performance to do the jobs that need doing,
- o provide an open software and hardware architecture,
- o be reliable,
- o be pleasing and fit into an everyday work environment.

The Lisa was built upon sophisticated hardware technology. This included a compact desktop unit containing a 12 inch black-and-white screen, and two revolutionary floppy disk drives called Twiggy. The Lisa internally contained a 68000 processor and 1 megabyte of memory (expandable to 2 megabytes). External to the Lisa's case was a keyboard and a rather rare (at the time) computer peripheral called a "mouse". The mouse was a key element of the Lisa's design. The title page of this paper contains a figure of the Lisa (this was drawn with LisaDraw by Business and Professional Software for its Lisa Art Department clipart collection).

Apple introduced the Lisa to the general public in January 1983 at a price of \$9,995. In April 1985, after a life of one and a half years, Apple discontinued the Lisa in favor of its sibling, the Macintosh computer.

The development of the Lisa was a tremendous undertaking for Apple and basically required most of the company's resources, both financial and personnel. Apple reports that Lisa cost \$50 million to develop and required 200 man-years of development effort. The story behind the development is a fascinating story in itself which should be more fully recorded. This paper will provide only a Reader's Digest version of the Lisa development history (a complete development history can only be written by the Lisa developers themselves, a history which this author does not think will ever see the light of day, alas!).

The Lisa may be considered a computer system that sprang from the loins of a host of successor systems. As such, many of the Lisa's "revolutionary" ideas were not really new (you may ignore the cries of the Apple marketers who think everything Apple does is new). The work by many computer companies over the decades (yes, decades) was used by Apple to design the Lisa. For example, Apple borrowed several key ideas from Xerox and its early Alto system.

In 1979 Mr. John Couch, Apple's head of software, was put in charge of a new Apple division called POS, Personal Office Systems. Mr. Couch's charter, as POS General Manager, was to develop and market the Lisa for the office system market (and provide a return on Apple's rather substantial Lisa investment).

From meager beginnings POS blossomed into a 300 person division with around 100 people devoted to the software and hardware development effort. Finally in charge of a division Mr. Couch was able to put together a team of very talented people from within Apple and from other Silicon Valley computer companies. The Lisa began life as a rather humdrum text based system, not a good sign for a "revolutionary" computer. After some field trips to a neighboring Silicon Valley computing center, Xerox PARC (Palo Alto Research Center), the Lisa developers (and some ex-PARC people who became Apple employees) embarked upon what became the Lisa computer as known to the public. One of the key changes at this point in the Lisa development history was the change from a text based system to a window based system (Xerox's Smalltalk development environment provided the inspiration for the Lisa's windows).

After repeated delays and two years beyond the initial Apple desired introduction date (January 1981), Apple unveiled the Lisa in late 1982 to selected outsiders. On 19 January 1983 Apple officially declared the Lisa a working system that would be deliverable in May 1983. Apple at this time hoped to mark the beginning of a new era in personal computers & establish the software technology standard of the 80's.

Apple's introduction of the Lisa hardware was also accompanied by a suite of revolutionary and sophisticated programs called the Lisa Office System (this program suite was later renamed "Lisa 7/7" by Apple). This suite consisted of 7 general application programs: LisaWrite, LisaDraw, LisaCalc, LisaGraph, LisaProject, LisaList, and LisaTerminal. Apple supported new Lisa owners with an extensive set of well-written documentation and an innovative interactive self-paced training course based upon the LisaGuide program (Apple called LisaGuide an "interactive manual"). For hardware diagnostic purposes Apple provided the LisaTest program, tho Apple appears to have discontinued the release of this program to Lisa owners in favor of sending the owners to the local friendly Apple dealer for Lisa servicing. For a user "operating system" Apple created the Desktop Manager. This program was a file organizer and a program manager. It created the illusion of a "desktop" on which users could place files, move files, rename files, delete files, and run programs.

On the printer front Apple provided Lisa with three different printers all capable of printing exactly what the user saw on the Lisa's screen. The dot-matrix printer could print both high-resolution text and graphics. The daisy-wheel printer was unique in that it could also print graphics, tho the ribbon was used up very quickly for this task. Later in the Lisa's life Canon provided a color inkjet printer for the Lisa. Apple appears to have had plans to support a laser printer with the Lisa, but these plans were abandoned (Apple did have a \$30,000 laser printer which Apple's Lisa developers used).

Apple's internal software development efforts centered around the Lisa Monitor development environment. This environment was text based and resembled the environments Apple provided for its Apple 2 and Apple 3 computer systems. The majority of Lisa programs were written in the Pascal language by Apple with a few programs written in 68000 assembly language. To give an idea of the size of this effort the Lisa operating system was written in around 90,000 lines of Pascal and each Lisa program (eg LisaWrite) contained somewhere around 50,000 lines each. The programmers used a wonderful window and mouse based editor called LisaEdit. Other languages included COBOL and BASIC.

For outside developers Apple provided a development environment for the Lisa called the Lisa

Workshop. The Workshop was a decedent of the Lisa Monitor environment. With the Workshop a programmer could develop rather sophisticated programs using mainly the Pascal language.

A major software development effort by Apple focused on the Lisa Desktop Libraries. This collection of around 100 software modules provided the software foundation for Lisa Technology. These modules were used by all Lisa programs (eg LisaWrite) and were the main reason for the Lisa's consistent user interface. A key component of the Desktop Libraries was QuickDraw, a fast and versatile graphics module which formed the basis for Lisa Technology. QuickDraw was written in around 40,000 lines of 68000 assembly language. After Apple developed the major Lisa programs Apple permitted outside developers access to the Desktop Libraries via the Lisa ToolKit.

During the Lisa's rather short life very few programs were written for the Lisa by outsider developers that supported the Lisa's revolutionary user interface. The main reason for this was Apple's inability to provide outside developers with a fairly simple development environment that allowed the developers to write Lisa-like programs without having to know a tremendous amount of technical details for the computer. Apple attempted to develop a "framework" program called the Lisa ToolKit. Tho Apple basically finished the ToolKit development Apple decided to not support Lisa software development and instead focus its resources on Macintosh development. Apple had also not documented fully nor designed in an easily understandable fashion the underlying software modules which formed the basis for the software component of Lisa Technology. Outside software developers were also hesitant to develop for the Lisa given its high perceived price and its low sales numbers.

A major headache for Apple during the development effort was the Twiggy disk drive. Named after the British model (the drives, like the model, were thin) these drives proved to be a little too revolutionary for Apple. The Lisa contained two Twiggy drives. Consisting of a single 5.25 inch high density floppy (860K bytes) with software controlled automatic ejection mechanism, micro-stepping technology Twiggy proved detrimental to Apple and its Lisa schedule. After introducing Lisa Apple wisely abandoned Twiggy in favor of the new more reliable 3.5 inch 400K bytes Sony micro-floppy disks. Complimenting the floppy drives was a ProFile hard disk drive (built originally for the Apple 3) holding 5M bytes of data (a 10M byte ProFile was later developed by Apple for the Lisa).

Apple spent a lot of time during Lisa's development testing Lisa features with real users. From Apple's literature on this topic the Lisa developers were occasionally suprised by the user testing results. The end product of these tests was a better Lisa system. In the area of foreign languages Apple spent much time providing understandable foreign language translations for the Lisa software. Apple developed a very useful technical solution to the problem of "localization" via Phrase files. A phrase file contained all the phrases that a Lisa program could display to the user. These files simplified the translation problem by letting a language translator with minimal computer skills translate the phrases in the phrase file itself without having to delve into the highly technical source code for the program. The Lisa at power-on also supported foreign language diagnostic messages which were keyed off of the attached keyboard.

Apple planned to sell around 10,000 Lisas in the last half of 1983 and 40,000 Lisa in 1984. In retrospect, Apple was able to sell around 80,000 Lisas during its 18 month life. On the average Apple sold 4,500 Lisas a month or 13,000 Lisa a quarter, figures which were very close to Apple's initial Lisa sales projections (I believe Apple's sales were less than expected in the first months after the Lisa's introduction, but sales picked up near the end of the Lisa's life).

Apple faced several significant risks with Lisa's introduction.

On the technical front the software development effort was immense and could easily delay Lisa's introduction. The Twiggy-disk drive proved barely workable, but was fixed by the use of the more reliable Sony 3.5 inch disk drives. The Lisa's printing technology was a risk since Apple was trying to get a dot-matrix printer and a daisy-wheel printer to basically emulate a high-resolution laser printer. The Lisa fonts and printer problems were resolved.

On the business front Apple had several very high hurdles to jump. Apple was unable to devote as much time as needed to helping outside developers. The Lisa's seven software programs were basically all the

programs Apple had for the Lisa's introduction. Apple was dangerously on the edge of confusing the Lisa and Macintosh product lines. Apple's data communication's strategy appeared to be rather primitive (Apple did develop for the Lisa a network called AppleBus [later called AppleTalk], but Lisa networking never seemed to catch on with users).

After a year with the Lisa product line Apple's management came to the conclusion that Apple could only support a single line of computer. The Lisa lost, Macintosh won. The Lisa's name was changed to Macintosh XL ("XL" has been quoted as meaning "Extra Large" or "X-Lisa"). The Lisa was discontinued in April 1985 and the Macintosh computer became Apple's top end system (the existence of the Apple 2 series at Apple at this time will not be discussed in this paper tho it was very important for Apple financially). After the Lisa discontinuation Apple supported the Lisa hardware with a 5 year program of spare parts and repair services.

Besides the name change to Macintosh XL Apple also developed a software program called MacWorks that allowed the Lisa to run most types of Macintosh programs. MacWorks was basically Apple's gamble to sell its remaining inventory of Lisas to the Macintosh public which desired a higher powered Macintosh than the original low-end Macintosh 128K and 512K models.

The balance of Apple's Lisa inventory was sold to a Logan, Utah company called Sun Remarketing (1-800-821-3221). Sun continues to sell the Lisa today as a Macintosh. Apple's final Lisa collection was placed in a landfill by Apple several years ago (I'm not certain of the reason for this but believe it may have been a result of a lawsuit by several Apple stockholders concerning the Lisa).

The Lisa legacy at Apple, at least in a physical sense, is still somewhat alive. The Apple Corporate Museum houses a few functioning Lisas for display purposes (I've never seen this collection [the museum was closed for repairs the last time I was in Cupertino], but believe the Lisas may be running Macintosh software, not Lisa software).

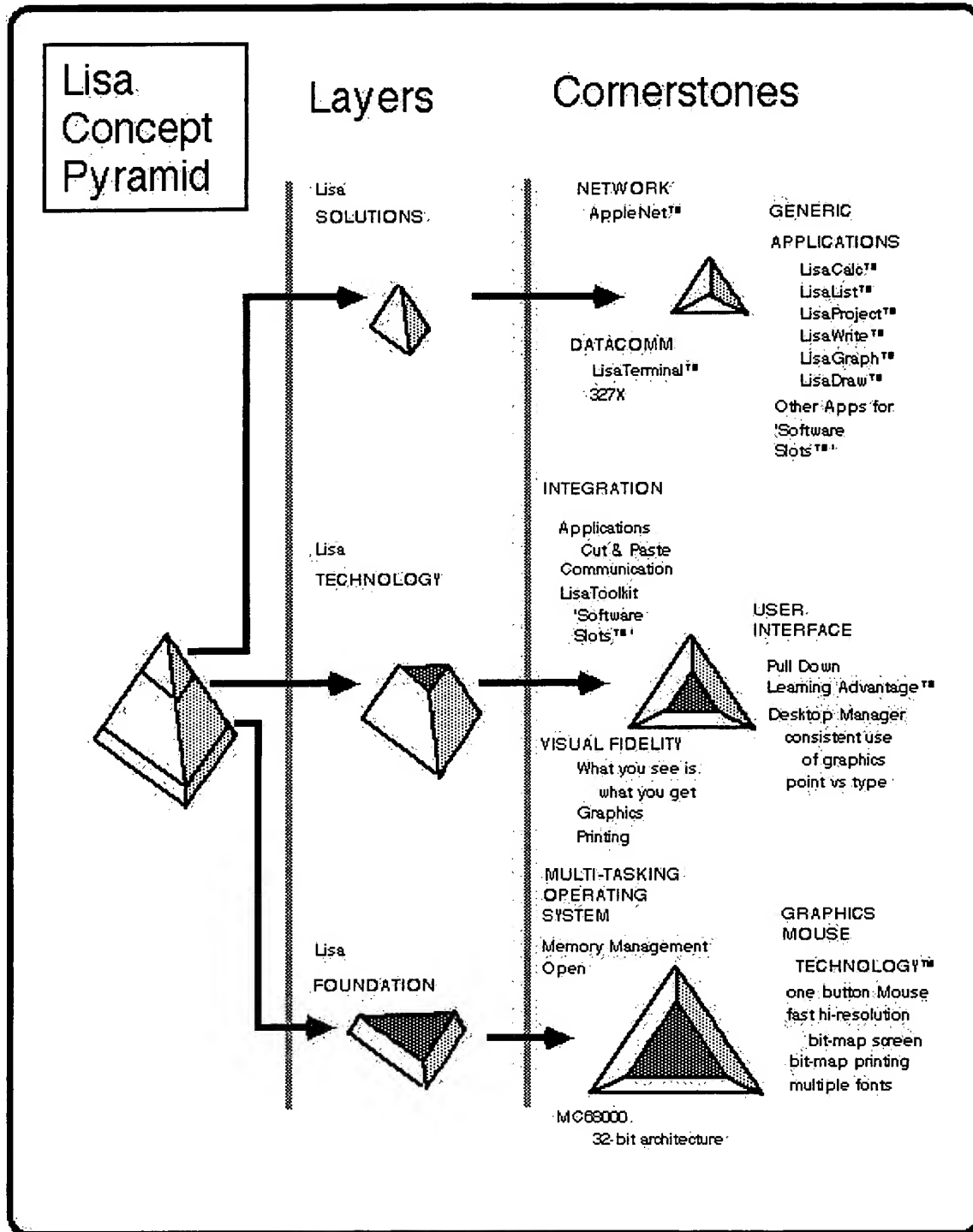
LISA TECHNOLOGY

The Lisa computer has proven to be one of the computer industry's most underrated personal computer systems of the last decade. When Apple released the Lisa in 1983 very few people seemed to understand the revolutionary concepts introduced by the Lisa. This misunderstanding, in retrospect, was also present at Apple.

Apple's philosophy behind the Lisa can be summed up in two words: Lisa Technology. This technology is a combination of hardware and software technology. What made the Lisa a revolutionary computer was the integration of its hardware and software and the desire by its designers to make the computer as easy to use as possible without sacrificing the user's ability to accomplish significant computing tasks. In Apple's words, Lisa Technology was based upon "the extensive use of graphics, consistent user interface, and pointing device (the 'mouse') which together emulate the way an individual works in the office".

Lisa is a system that has to be used extensively before it can be appreciated. In the words of one of Apple's Lisa documents the Lisa hardware and software combination "must be seen to be believed". Telling people about Lisa's important differences will only cause your credibility to drop because they will not believe you. Lisa is really different. Demonstrating the system is some help, but not a lot. There is always the nagging question, "Can something that looks so gimmicky really do any serious work?" While there are people who have tried Lisa and really don't like it, I think that most people who spend several hours with a Lisa doing real work will come away with positive conclusions about the Lisa's value (or at least the value of its technology).

One effective presentation tool used by Apple for Lisa customers was the Lisa Concept Pyramid. The next figure is a diagram showing this pyramid.

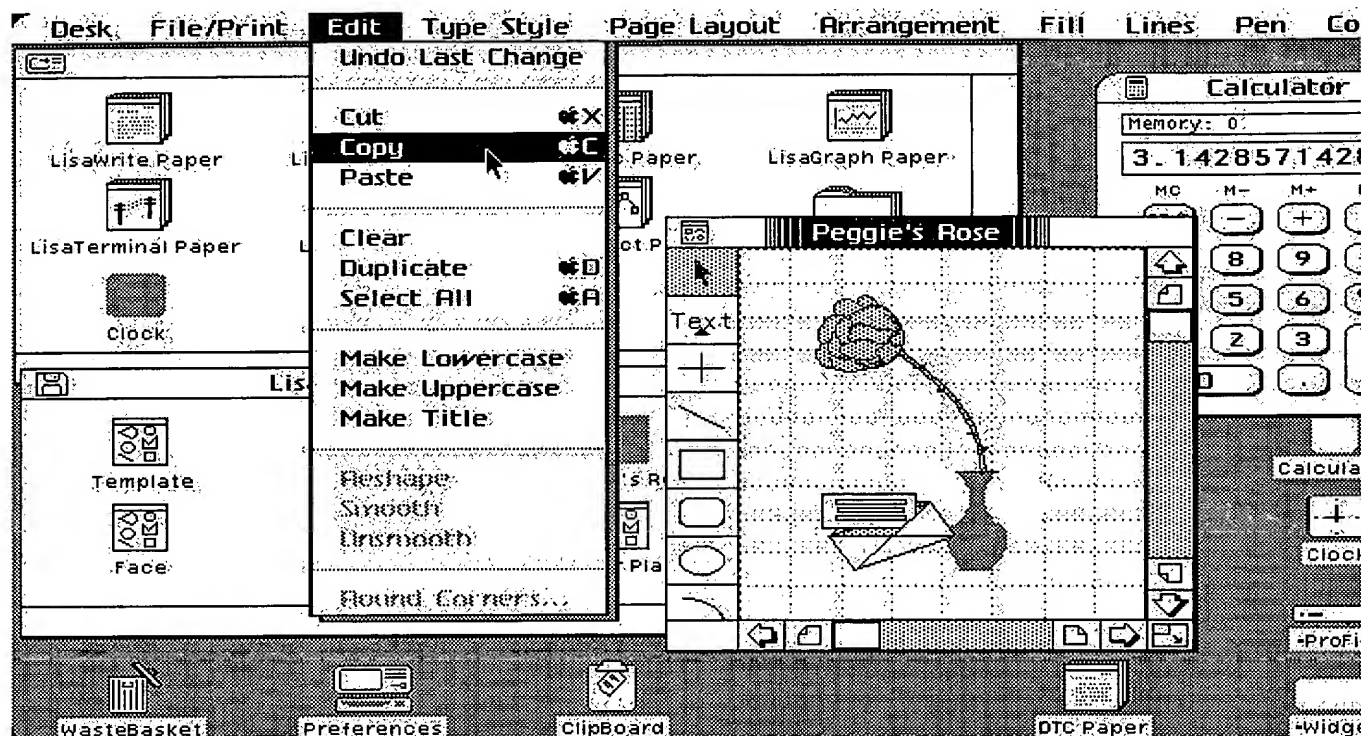


The top part of the pyramid represents the solutions required by the target customer, the information professional (also called "knowledge workers" by Apple). The generic applications are all tools which can be used by almost anyone.

The middle layer of the pyramid represents the technology that had to be created in order to produce a truly "easy to use" system. The original prototype of this kind of technology was created within Xerox PARC. This is where the bulk of Lisa's 200 man-year effort went in developing Lisa. Many of the refinements and contributions of Apple are in the areas of Integration and a User Interface that is easy to learn and use. The one button mouse and the software to allow that was key to that accomplishment. The third cornerstone is Visual Fidelity, or what you see on the screen is exactly what you get when printed.

The bottom layer is the foundation for the layers above. The major design issues were all dictated by the needs of the software rather than the traditional way in which the hardware dominated the design. The Lisa operating system needed to be multi-tasking to allow multiple programs to co-exist at once on the screen. The Graphics Mouse Technology is the key to making the Lisa's user interface possible.

Note: Apple Computer created this figure as a LisaDraw example.



A graphical overview of a typical Lisa screen should help the reader better understand the Lisa's features that made it unique in 1983. For those readers with a knowledge of the Macintosh or other object-oriented systems (eg Microsoft Windows for the IBM PC), the following will be rather boring. The next figure contains a screen image of the Lisa showing several key components of the Lisa's user interface, one of its major distinctive features.

The Lisa screen contained a menubar at the top that allowed the user to select commands using the mouse. The screen shows the Edit menu selected with the mouse pointer preparing to activate the Copy command. Arranged on the Desktop are several windows and icons. Windows display file data or file directory information to the user. Several windows are visible with some overlapping others. The front-most window is a LisaDraw window showing a freehand drawing of a rose. The menubar is owned by the front-most window so in this case shows the various major command groups available for LisaDraw.

All Lisa user actions were centered around the one-button mouse. The user moved the mouse pointer (usually a small arrow-shaped pointer) to the screen object of interest. For example, to activate a menubar command the user moved the mouse pointer to the appropriate command group label, eg Edit, and pressed the mouse button. The selected menu would then "pull down" showing a list of the specific commands the user could work with. Still holding the mouse button down the user dragged the mouse pointer to the desired command, eg Copy, and released the mouse button when the mouse arrow touched the Copy command and the command name in the menu was highlighted. At this point the selected menu command was activated and performed its function on the selected window object. For example, if you were using LisaWrite, the Lisa's word processor, you could copy data from a LisaWrite document by first selecting with the mouse pointer the text to copy, and then activating the Edit menu Copy command.

The Lisa's technology for the most part has been copied by other systems both in Apple and elsewhere. But in my opinion several aspects of the Lisa's design made the Lisa unique. These aspects to date have not been adopted by other microcomputer systems to any significant degree.

SOFT POWER-ON AND POWER-OFF

The Lisa was powered on by a button on the front plate of the computer case. This same button also powered off the Lisa. The difference tho here was that the Lisa's power button was not a true power button. The Lisa was never turned off, it was always running. When the Lisa was "off" it was really in a low-power mode that only waited for the user to press the power button. If powered-on and the user pressed the power button to turn the Lisa "off" the Lisa told the operating system of this fact. The operating system (really the Lisa Desktop Manager) then commanded all executing programs to save their document's data. When all programs indicated that they had saved their documents the Lisa then powered-off to its low power mode.

SELF-ORGANIZING DESKTOP

In conjunction with the Lisa's soft power-on/off button the Lisa maintained an orderly desktop for the user. When the user power-off the computer the Lisa's Desktop Manager would save all open document data to disk AND save the state of the desktop too. When the user powered-on the Lisa the Desktop Manager restored the desktop state as it was when the user powered-off.

DOCUMENT-CENTERED VIEW

The Lisa supported a document-centered view. In this view documents were important, not programs. To start a new document the Lisa user tore off a sheet of "stationary" from a stationary pad icon that resided on the screen. Each Lisa program came with a stationary pad. When "opened" by the user a stationary pad automatically duplicated itself, set its name to the current date, and created a window on the screen for the user. The Macintosh in System 7 supports stationary pads, but the Macintosh does not use a document-based view. Program icons were really not important on the Lisa except to move the program file to another disk. Generally, Lisa user's kept their document stationary pads in an easily accessible location on the screen and kept the program icons in a folder which they generally never opened except to add new programs or delete old programs.

RELIABLE FILE DATA STORAGE

The Lisa's file system was designed to be reliable. To reduce the impact of a system crash, the file system maintains distributed redundant information about the files on the disk storage. Duplicate copies of critical information were stored in different forms and in different places on the disk media. For example, the information in the central disk catalog about a file was also stored in a special disk block at the head of that file. Also each block on the disk specified the part of the file to which it belonged (this information was called a block "tag"). Since all the files and blocks on a disk were able to identify and describe themselves, there were several ways to recover lost information. A utility called the Scavenger was able to reconstruct damaged disk catalogs from the redundant information stored about each file.

In my experiences with the Lisa I've only had one Lisa disk that the Lisa scavenger could not fix. The scavenger is activated by the Lisa whenever the Lisa determines that a disk has problems. At this point the Lisa's low-level operating system informs the Desktop Manager which displays a dialog for the user. The user may then select to either have the Lisa repair the disk or eject it.

The Lisa's ProFile hard disk and Twiggy floppy drives also supported an extensive set of reliability features. Once such feature was disk block sparing. When a disk block (a unit of 512 bytes on the disk) was detected by the Lisa as beginning to fail, the Lisa's disk drive (either the ProFile or Twiggy) moved the data to a spare area of the disk media. The failing disk block was marked as "bad". Whenever a program attempted to access a bad block the disk drive automatically used a "spared" data block instead.

The original Macintosh used to support block tags at the hardware level, but Apple never provided a

Scavenger program at the software level to use these tags. Neither did Apple's Finder program (the Desktop Manager equivalent) support any checks for failing disk blocks. After several years Apple abandoned disk block tag use, tho Apple has now introduced the use of block sparing for high density floppies and hard drives.

UNIQUE SYSTEM SERIAL NUMBERS

Each Lisa contained a unique serial number which the Lisa Desktop Manager could read (the serial number was stored in a special electronic chip). The Lisa used the serial number for program protection and for establishing unique communication nodes for the Lisa data network.

SIMPLE BUT EFFECTIVE PROGRAM ANTI-PIRACY AND DATA PROTECTION

All Lisa's provided a simple and effective method of protecting user programs from piracy and data files from snooping eyes of co-workers.

When the user installed a new program the Lisa "serialized" the disk copy of the program. This serialization process wrote the Lisa's serial number to the program floppy disk. The user of this floppy disk would then be unable to copy this "protected master" program file to another Lisa. But the user could execute the protected program from the floppy disk, a rather tedious task given that the Lisa programs tended to be rather large and floppy disk based program execution would try the patience of most users.

Document protection was provided by a password scheme. The user could select a document icon with the mouse and thru a menu command obtain general information about the document via a dialog. This information included the document's size and the protection password. If the user typed a password into this informational dialog the document was protected. When a user attempted to open a protected document the Lisa displayed a dialog asking for the password.

NON-PHYSICAL FILE NAMES

The Lisa Desktop Manager did not display physical document names to the user. Instead the Lisa presented the user with a document name "view" which made the user think that the Lisa stored document names with up to 63 characters. The underlying Lisa file system allowed file names to be up to 31 characters in length and the file names could not contain the directory separator characters, "-". The Lisa Desktop Manager maintained for each document a user document name (eg "Vacation Plans - 1983") and a physical low-level file name (eg "{T3D456}").

This non-physical file name scheme also supported the use of multiple documents with the same name, tho the underlying physical file names were different. In this regard the Lisa mimicked the physical working desktop where a worker could have 5 photocopies of the same document on his desktop at the same time.

To the best of my knowledge no other microcomputer currently supports non-physical document names.

PULL-OUT HELP CARD IN THE KEYBOARD

The Lisa keyboard contained small pull-out cards. These cards consisted of several firm plastic sheets containing helpful information. The first sheet showed the Lisa keyboard and a layout of all the special keys that the user could type with the Lisa keyboard's Option key. Other cards contained concise information about Lisa operating features such as how to copy documents. Another card was blank and allowed users to write down important information pertaining to the Lisa (eg phone number of the local Apple service center or representative).

HARDWARE BASED MEMORY MANAGEMENT

The Lisa supported a sophisticated hardware based memory management strategy. This strategy allowed Lisa programs to believe they could access more memory than there really was in the Lisa (note: Lisa

contained 1 megabyte of physical memory with about half of it used for the Lisa Desktop Manager and the Desktop Libraries). This strategy also allowed the Lisa to segregate executing programs so that they could not interfere with other programs in the event a program tried to access another program's data when it should not have tried this. In this case the Lisa would stop the errant program and alert the user that the program has been stopped.

ENVIRONMENT WINDOW

Lisa provided a simple method for the computer to run radically different operating environments. This method was implemented with the Environments Window. When the Lisa started up it first ran a special low-level program called the environment selector. This program ran a default operating environment if one was present. Otherwise, this program displayed a window for the user allowing the user to select the environment to use. Apple supplied two different environments, the Office System environment (for non-technical end users) and the Workshop environment (for programmers). Other companies supplied additional environments (eg the UNIX environment).

ADJUSTABLE SCREEN CONTRAST AND DIM DURATION CONTROL

The Lisa screen contrast could be adjusted by the user with a special program called Preferences. This program also allowed the user to define a duration of inactivity for which the screen would automatically dim and the dim contrast. This feature prevented screen "burn in" which happens when a screen is set to a high contrast and images on the screen burn into the screen's phosphorus.

When automatically dimming the screen the Lisa did not suddenly dim the screen. Instead it gradually dimmed the screen in pleasing dim increments. This was a nice touch on Apple's part which saved the user from suddenly encountering a jarring screen change contrast change from a bright level to a dark level.

PRIVACY FEATURE FOR THE SCREEN

For Lisa users who dealt with sensitive data on their Lisa screen and could not allow people to see this data, the Lisa provided a simple screen privacy feature. The user could at any time press some special keyboard keys and the screen would automatically dim (Option-Shift-0 [zero] with 0 on the numeric keypad).

SELF-TEST AND FOREIGN LANGUAGE USAGE VIA THE ATTACHED KEYBOARD

The Lisa when powered on ran a special program which tested the Lisa's hardware components. This testing made certain that the Lisa was in well enough shape to run user programs and manipulate user data. Hardware failures caused the Lisa to alert the user with a specific failure error number which could be used by an Apple service center to replace the defective part.

During these diagnostic tests (which took around 3 minutes to execute) the Lisa displayed icons and messages to the user. The messages could appear in either English, French, or German. The Lisa determined which language to use by which keyboard was attached to the Lisa. The Lisa keyboards were self-identifying and provided the Lisa with such information as the keyboard "language". For example, if the keyboard was a German keyboard, then all diagnostic messages appeared in German. Unfortunately, the Lisa's Office System and programs like LisaWrite did not use the appropriate language for its menus and messages based upon the keyboard type.

SPECIAL SERVICE MODE

The Lisa contained a special "service mode" which could be activated when the Lisa was powered on. This special feature allowed the knowledgeable user to run some special diagnostic tests on the Lisa. Also supported was a cross-hatch pattern for the screen which assisted the user in adjusting the screen contrast.

EASY SYSTEM DISASSEMBLY

Lisas were very easy to disassemble by the user without the use of any tools. Apple allowed the user to essentially disembowel a Lisa except for dangerous portions like the monitor screen. For example, users could remove and replace disk drives with ease by just popping the front off (finger grips are at the base of the front panel) and unscrewing a single screw which held the disk drive in place.

MACINTOSH XL, MACWORKS, LISA-TO-MAC MIGRATION KIT

Apple developed the MacWorks program as a way for Macintosh owners to use the Lisa's bigger screen, bigger memory, and hard disk. When Apple planned to discontinue Lisa Apple was left without a high-end system. All Apple had to offer at the time was the Macintosh 128K or 512K models, or the Lisa which ran only Lisa software.

Apple's hardware and software engineers quickly developed a special program named MacWorks that allowed a Lisa owner to turn his Lisa into a big Macintosh. Apple produced three versions of MacWorks and later turned over all MacWorks development to Sun Remarketing (Logan, Utah) which went on to develop MacWorks Plus, an enhanced MacWorks that lets a Lisa emulate a Macintosh Plus computer.

With the development of MacWorks Apple changed the name of the Lisa to Macintosh XL. Apple then was able to sell a rather surprising number of Lisas (i.e. surprising to Apple). MacWorks is still a commercial product for Sun Remarketing, tho I wonder how many Lisas/Macintosh XLs Sun really sells now.

For the Macintosh XL Sun Remarketing has been quite prodigious in producing hardware peripherals. This includes larger hard disks and a SCSI board that allows SCSI devices to work with the XL.

The problem of transferring Lisa data to a Macintosh was solved by Apple via the Macintosh XL Migration Kit. This kit consisted of a special Lisa program called Lisa-to-Macintosh and a set of Macintosh data conversion programs. The Lisa program's main function was to place Lisa data files on a Macintosh disk. The Macintosh data conversion programs took the Lisa data files on the Macintosh disk and converted them to the appropriate Macintosh data file. For example, LisaWrite documents could be converted to either MacWrite or Microsoft Word data files for use by the Macintosh.

MACINTOSH: BACK TO THE FUTURE

Tho the Lisa is now a decade old, Lisa Technology still influences the Macintosh (and the Apple 2 computer series). The title of this section attempts to convey the idea that as the Macintosh product line matures it has in many ways approached the Lisa's technology of 1983.

When Apple introduced the Lisa in January 1983, the Macintosh was still under development. In January 1984 Apple introduced the Macintosh, a physically smaller version of the Lisa.

The Macintosh from a casual glance resembled the Lisa in many ways. But underneath, the Macintosh and the Lisa were totally different. The Lisa supported a multi-tasking operating system, the Macintosh supported single-tasking. The Lisa's extra memory (8 times larger than the Macintosh) and hard drive allowed larger more-sophisticated Lisa programs and larger data files.

The Lisa's Desktop Manager and its distinctive user interface were used by the Macintosh developers as a foundation for the Macintosh's Finder and its user interface.

A short list of Lisa legacy items from Mr. Larry Tesler's article "The Legacy of the Lisa" (MacWorld magazine, Sep. 1985) appear below (I've added the Software development list):

- o User interface

- Menubar, pull-down menus, keyboard-activated menu commands
- Printing dialog boxes
- Appearance, structure, and operation of windows and scroll bars
- Ability to move windows and icons by dragging with the mouse
- Windows that zoom to open and close
- Dialog and alert boxes with buttons and check boxes

o Applications

- QuickDraw graphics package
- LisaDraw converted to MacDraw
- LisaProject converted to MacProject
- LisaWrite, LisaCalc, LisaTerminal influenced Macintosh applications
- Lisa Desktop Manager influenced the Macintosh Finder design
- Lisa printing architecture influenced Macintosh printing

o Software development

- Lisa Pascal converted to MPW Pascal
- Lisa Clascal influenced MPW Object Pascal
- Lisa Workshop influenced design of Macintosh Programmer's Workshop
- Lisa Workshop editor (LisaEdit) influenced editor design
- Lisa ToolKit influenced heavily the Macintosh MacApp framework

o Hardware

- Single-button Mouse design
- ImageWriter printer

The Lisa legacy may also be seen in its influence, thru the Macintosh at least, on the state of non-Apple microcomputers. This includes Microsoft Windows, Digital Research's GEM, and Commodore's Amiga DOS. If one looks at these systems closely one will see that they have a superficial resemblance to the Lisa (and Macintosh) environments. But many times below the surface one finds behavior that is reminiscent of the older PC-DOS and C/PM systems from long ago.

Other Macintosh technical areas were also influenced by the Lisa:

- o System 7 Stationary
- o System 7 Apple Events
- o Finder's Print Monitor

When I work with the Macintosh (eg a Macintosh II series machine) now (1993) I notice two prominent differences from the Lisa of 1984.

First, the Macintosh is much faster than the Lisa. Editing complicated images in LisaDraw is almost an exercise in futility. Apple has made excellent strides in enhancing the speed of its Macintosh series. If Apple had kept the Lisa product line one could only assume that hardware speed improvements would have emerged as technology advanced. I've heard that Apple even developed a prototype Lisa based upon the 68020 processor, but canceled this project when Apple canceled the Lisa. This may have made the Lisa a much faster machine.

Second, Macintosh seems incomplete in some areas. For example, the Macintosh Finder does not save the desktop and open application location and data states as did the Lisa's Desktop Manager. I miss being able on the Lisa to press the Lisa's power-off button and just walk away from the computer. I could do this because I knew the Lisa would save all my application data and turn off automatically. Later, when I wished to resume work with the Lisa I just pressed the power-on button and the Lisa

showed me a screen matching the one I had left.

I don't mean to criticize the Macintosh unfairly since it has in its own right contributed much to the field of personal computing. But from an overall perspective the Lisa was a result of a total system approach that delivered integrated functions with a consistent and high quality user interface. I can only speculate how this "total approach" originated but think it may have something to do with the experience and age differences of the Lisa and Macintosh development teams. From my readings it appears that the Lisa developers were about a decade older than their Macintosh counterparts. The Lisa developers came mainly from large computer companies (eg Xerox, HP, DEC) which dealt mainly with mini-computer class systems, while the Macintosh developers came mainly from Apple itself and its Apple 2 and 3 computer divisions. The Lisa developers also appear to have had a different perspective on programming than the Macintosh developers. The Lisa's core software was mainly written in Pascal, a high-level language. Macintosh core software on the other hand was written in 68000 assembly language.

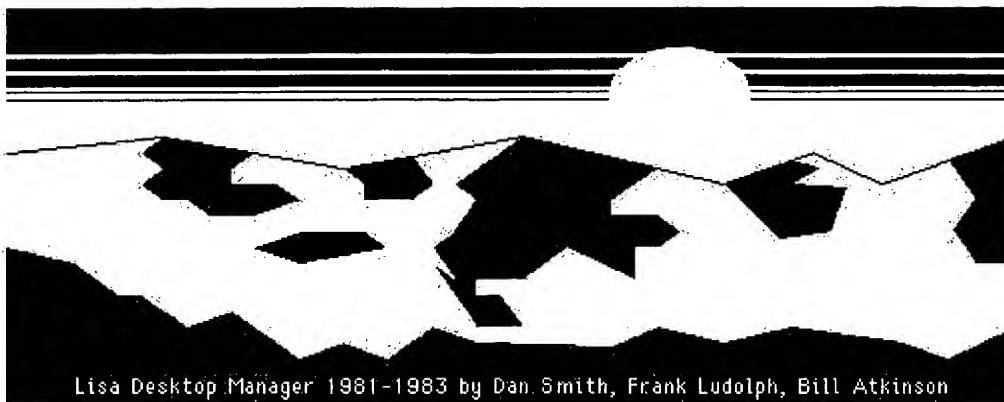
I can only hope that Apple will try to bring back some Lisa technology that is appropriate for its Macintosh (and newer) systems. For this hope to become reality Apple will need to preserve the Lisa development materials as best it can. Unfortunately, from my experiences with Apple in this area, Apple appears to have lost some of the Lisa materials already and does not seem too interested in spending time on what many at Apple may consider antiquated Lisa technology. I see the preservation of the Lisa design notes and the Lisa Office System source code files as very important for the continuance of the Lisa's legacy.

Hopefully Apple will remove the confidentiality status of its Lisa materials in the upcoming years so that outsiders like myself may have access to this body of knowledge.

MACINTOSH SYSTEM 7 LISA DEDICATION

Even tho the Lisa was considered by many at Apple to be a failed experiment there appear to be some Applers who still remember the Lisa and its legacy to the Macintosh. These people provided a short dedication to the Lisa Desktop Manager and its designers in Apple's latest operating system, System 7, which debuted in 1990, almost a decade after the Lisa's debut.

On a Macintosh running System 7 you may obtain a dialog showing a Lisa dedication. Hold down the Option key and select with the mouse the Apple menu item "About the Finder" (this item is called "About this Macintosh" if the Option key is not held down). You should see a pretty mountain scene with some people's names at the bottom of the scene. Wait about 15 seconds and the bottom names will scroll showing the names of the people at Apple who contributed to the various versions of the Macintosh Finder. Eventually you will see the following dialog describing the Lisa Desktop Manager:



REFERENCES

There exist many reference materials for the Lisa. Unfortunately, most of these references are rather difficult to obtain. Fortunately, the author of this paper appears to have most everything ever written about the Lisa both by the general press and by Apple Computer. All my Lisa materials are available to others if they pay for the copying and shipping.

Note that this discussion of Lisa references mainly covers those reference works which pertain to the original Lisa, not the Macintosh version which Apple called Macintosh XL. The original Lisa ran its own operating system (called the Lisa OS) while the Macintosh XL ran the Macintosh OS.

For general Lisa information I recommend the following books and articles:

- o The Complete Book of Lisa (Kurt Schmücker, 1984)
- o The Lisa Computer System (BYTE magazine, Feb. 1983)
- o The Lisa 2: Apple's Ablest Computer (BYTE magazine, 1984)
- o A First Look at Lisa (Personal Computing magazine, Mar. 1983)
- o Apple's Lisa (The Seybold Report on Professional Computing, Jan. 1983)
- o Lisa Makes the Scene (Apple Orchard magazine, Mar. 1983)
- o Background Information: How Lisa Works (Apple Computer, 1983)
- o Introducing Lisa: Apple's Personal Computer for the Office (Apple Computer, 1983)
- o Apple Introduces Lisa: A Revolutionary Personal Computer for the Office (Apple, 1983)
- o The Apple Lisa (Officemation Product Reports, Apr. 1983)
- o Lisa/Mac XL Handbook (Michael Posner, Lisa Lives User Group, 1992)
- o How Apple presents Lisa (Softalk magazine, Sep. 1983)
- o Personal Computer Series: Apple Lisa 2 (Electronic Design, Jul. 1984)
- o Lisa Owner's Manual (Apple Computer, 1984)

Many other general Lisa references exist, ranging from general magazine articles to press clippings. Three books were written for the Lisa, but only Schmücker's book may be considered worth reading. Michael Posner's 123 page handbook is worth reading if you want a decent overview of the Lisa's history and operational information. This handbook is also noteworthy because of its current publication date, 1992 (this may show to some the longevity of the Lisa). To join Michael Posner's Lisa Lives user group write to him at 5170 Woodruff Lane, Palm Beach Gardens, Florida 33418.

Several Lisa-specific magazines were also around for a while.

- o Semaphore Signal
- o ICON
- o The LisaTalk Report

Semaphore Signal was a very detailed Lisa newsletter which produced around 30 issues. ICON was also good. The LisaTalk Report was the newsletter for the Lisa NetWorkers, a group which tried to breath some life into the Lisa after Apple discontinued this machine.

For information about the Lisa's first operating system (aka the Lisa Office System or Lisa 7/7) see the following.

- o Reviewing Lisa's Office System (St. Mac magazine, Mar. 1984)
- o Venerable Lisa Software Improved (Personal Computing magazine, Mar. 1985)
- o The Lisa Office System (Apple Computer, 1984)
- o Lisa Product Data Sheets (Apple Computer, 1983-1984)
- o LisaGuide screen prints (David Craig, 1984)

The Product Data Sheets are worth reading if you desire some knowledge about the programs Apple created for the Lisa. These describe the Lisa itself, LisaWrite, LisaDraw, LisaCalc, LisaGraph, LisaProject, LisaList, and LisaTerminal. The LisaGuide screen prints are a collection of all the screens shown by Apple's interactive tutor for new Lisa users, LisaGuide. There exist 126 screen prints in this

collection.

For historical information about the Lisa see the following.

- o The Legacy of the Lisa (MacWorld magazine, Sep. 1985)
- o The Apple 32 Line: Past, Present, and Future (A+ magazine, Jul. 1984)
- o Lisa Chronology (Orphan Support column, MACazine, 198?)
- o Fire in the Valley (book, 198?)
- o The Little Kingdom (book, 198?)

The Lisa Legacy article is well worth reading since it was written by one of the Lisa's main designers who provides a concise narrative of how the Lisa changed personal computing.

For those readers with a technical bent there exist a smorgasbord of technical Lisa materials that should satisfy the most hungry technologists.

- o The Architecture of the Lisa Personal Computer (Proceedings of the IEEE, Mar. 1984)
- o Lisa User Interface Guidelines (Apple Computer, Nov. 1983)
- o Lisa's Alternative Operating System (Computer Design, Aug. 1983)
- o Lisa: Up Close and Personal (Softalk magazine, Sep. 1983)
- o Network Introduction Package (Apple Computer, 1983)
- o The Lisa Applications Toolkit (Apple Computer, 1983)
- o Lisa Workshop User's Guide (Apple Computer, 1984)
- o Lisa Development System Internals Documentation (Feb. 1984)
- o Lisa Desktop Libraries Interface Listings (David Craig)
- o Lisa Hardware Manual (Apple Computer, May 1983)
- o Guide to the OS (Apple Computer, Oct. 1982)

The Lisa Architecture paper is a tremendous resource of Lisa technical design and implementation facts. The author of this extremely difficult to find paper was one of the Lisa's main designers. The Lisa User Interface Guidelines is a wonderful 100 page document that describes the design behind the Lisa's user interface. The Desktop Library interface listings describe the routines and data structures which Apple developed to implement Lisa Technology. The Lisa Hardware Manual is a rather lengthy tome describing Lisa's hardware in extreme detail. If you are a nut about computer electronics, this manual is for you. The author also has a 1981 version of the hardware manual which is rather short (80 pages versus 200 pages for the 1983 version). The "Guide to the OS" was an internal Apple development manual describing the Lisa Monitor development environment, the precursor to the public Lisa Workshop development environment. This document should be of interest to those people who have a yearning to learn about the Lisa's early development years and the tools which Apple's programmers used for the programming effort.

Shortly after Apple introduced the Lisa in 1983 an enterprising computer engineer from Seattle started a Lisa programming group called the ToolKit User's Group (TUG). This group centered around the software package called the Lisa ToolKit, which was based on the Pascal language derivative Clascal, as developed by Apple for long-term Lisa development. For those with an interest in the Toolkit the following resources may be beneficial.

- o Software Frameworks: The Lisa ToolKit (BYTE magazine, Dec. 1984)
- o Professor Override's Almanac (David Redhed, TUG's newsletter, 4 issues)
- o Save the ToolKit: A Call to Arms (Call A.P.P.L.E., Jun. 1984)
- o An Introduction to Clascal (Apple Computer, Jul. 1984)
- o The Lisa Applications ToolKit Reference Manual (Apple Computer, 1984)
- o Object-Oriented Programming for the Macintosh (Kurt Schmucker, 1986)
- o Toolkit source code (David Craig)

The Schmucker Macintosh book is recommended reading for those wanting a concise introduction to the Lisa ToolKit and the Clascal language. Tho devoted to the Macintosh and MacApp, Apple's Lisa

ToolKit son, this book does provide an excellent chapter on the Lisa ToolKit and Clascal. The ToolKit source code is a wonderful collection of well-written modules which any programmer could benefit from reading.

The history and details behind the Lisa's development are documented in the following references.

- o The Past, Present, and Future of the Macintosh Desktop (Semaphore Signal, Mar. 1986)
- o An Interview with Wayne Rosing, Bruce Daniels, and Larry Tesler (BYTE, Feb. 1983)
- o The Birth of the Lisa (Personal Computing magazine, Feb. 1983)
- o Lisa's Design (Popular Computing, Mar. 1983)
- o Lisa: A Vision for the Couch at Apple (Softalk magazine, Jul. 1983)
- o Racing to a Draw: How Apple Gets its Software out the Door (St. Mac, Jun. 1984)
- o Apple's Second Try at UNIX (UnixWorld magazine, Mar. 1988)
- o A Death in the Family (ICON magazine, Vol. 2, No. 3)

The BYTE interview article is excellent since it contains an interview with the main Lisa designers. The "Racing to a Draw" article is worth reading since it provides a fairly detailed description of how Apple developed the LisaDraw and MacDraw programs. The "Couch" article is a good read since it discusses Mr. John Couch, the General Manager for Lisa, who may be considered Lisa's "father".

For those with inquiring minds about MacWorks, the software which allows a Lisa to run (most) Macintosh software, see the following.

- o MacWorks XL User's Manual (Apple Computer, 1984)
- o MacWorks Plus: Making a Lisa Speak Macintosh (MacTech Quarterly, Spring 1989)

There exist several articles and manuals that describe how to transfer Lisa data to a Macintosh. This transference is based upon the Apple program called the Macintosh XL Migration Kit.

- o Using the Macintosh XL Migration Kit (Apple Computer, 1985)

Several U.S. patents from Apple cover key Lisa technologies.

- o Lisa Twiggy disk drive front panel (Patent # Des. 266,426, Oct. 1982)
- o ProFile hard disk case (Patent # Des. 273,295, Apr. 1984)
- o Lisa case (Patent # Des. 277,673, Feb. 1985)
- o Lisa mouse (Patent # 4,464,652, Aug. 1984)
- o Twiggy disk drive (Patent # 4,466,033, Aug. 1984)
- o Lisa QuickDraw "regions" (Patent # 4,622,545, Nov. 1986)
- o Lisa Memory Management Unit (Patent # 4,926,316, May 1990)

There exist several good Lisa hardware repair books which current Lisa (or Macintosh XL) owners should seriously consider purchasing.

- o Macintosh Repair & Upgrade Secrets (Larry Pina, 1990)
- o Lisa/Macintosh XL Do-it-yourself Guide (Sun Remarketing, 1990)
- o Apple Service Technical Procedures: Lisa/Macintosh XL (Apple Computer, 1988)

The Apple Service Technical Procedures manual is a very detailed document describing how to fix errant Lisas (or Macintosh XLs). The original Lisa systems came with a wonderful disk called LisaTest that allowed a novice Lisa owner to diagnose the Lisa's maladies.

For an overview of the computing technology that Apple "borrowed" heavily upon for the Lisa's design see the various papers from Xerox and others (the entries marked "*" are contained in the Xerox publication "Xerox Office Systems Technology: A Look into the World of the Xerox 8000 Series Products" [OSD-R8203A, Jan. 1984]).

- o The Star User Interface: An Overview (*)
- o Designing the (Xerox) Star User Interface (* [also in BYTE, Apr. 1982])
- o Alto: A Personal Computer (Computer Structures, Principles, and Examples, 1982)
- o The Smalltalk Graphics Kernel (BYTE, Aug. 1981)

This paper's author has written several somewhat interesting Lisa papers which may attract the attention of a few people.

- o Apple Lisa Graphical Object-Oriented User Interface (Oct. 1987)
- o A Review of Apple's Lisa Pascal (Oct. 1988)
- o A Review of Apple's Lisa Workshop (Oct. 1988)
- o Apple Lisa 7/7 Tool Deserialization (1988)

SUMMARY

In retrospect the Lisa may be seen as an experiment that both succeeded and failed. The Lisa succeeded by introducing several concepts to the computing industry which in some cases revolutionized how computers were built and how users used them. The Lisa failed by not being able to convey what it was really trying to accomplish, that is, convincing people (both power users and normal users) that a computer system can be easy to use, powerful, and reliable.

Apple Computer is one of the few computer companies in the world that has the gumption to attack projects like Lisa. Apple's success in developing the Lisa, showing that a desktop system could be both powerful and easy to use, and attempting to migrate some of the Lisa's features to its other computers (eg Macintosh and Apple 2 series) should be considered a feather in the hat of all the people at Apple who participated in the Lisa adventure.

In a few short years a rather small group of very talented and dedicated people at Apple built a computer system designed to be used by ordinary people. What specific circumstances created this conjunction of technical talent is beyond my knowledge. However, it did happen and for a brief time there was an unparalleled flash of brilliance that is now a fading image. Hopefully this fading flash will be rekindled in the future.

Having the Lisa legacy without learning from it would be worse than not having a legacy at all.

That's all, folks !

Lisa2

1979 Steve Jobs Xerox
Oriented Programming Ethernet networking
Jobs

3 Graphical User Interface Ethernet networking AppleLink Lisa Object Oriented Programming NeXT

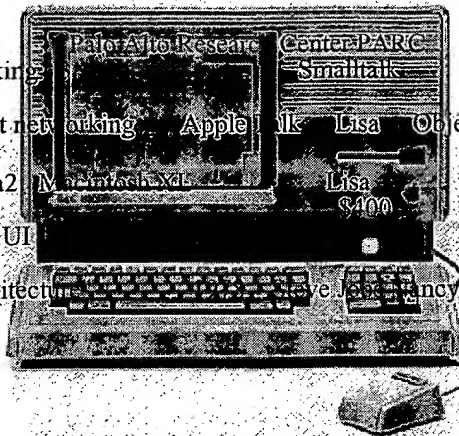
Lisa Lisa2 Lisa Lisa2
Lisa2 Sun Remarketing
Macintosh Macintosh Lisa GUI

Lisa "Local Integrated Software Architecture" Steve Jobs Nancy Rogers

Graphical User Interface Object
Bill Atkinson PARC Bill

\$5,000

Lisa Nicole



Lisa LisaWrite

Apple UNIFILE
SONY 3.5 Apple
Apple II Apple III UNIFILE

Apple II III Macintosh
Lisa Lisa2 3.5

Twiggy floppy drive 2



Apple's Twiggy Disks
(<http://www.brouhaha.com/~apple2world/computing/lisa/twiggy.html>)
Lisa Twiggy floppy drive Apple II diskette

THE APPLE LISA COMPUTER
(<http://toybox.asap.net/~apple2world/computing/lisa/twiggy.html>)
Apple Lisa

The Computer Museum
(<http://www.acornworld.net/~apple2world/computing/lisa/twiggy.html>)
Lisa Apple II

Apple Lisa Web Page
(<http://galena.tjs.org/tom/>)
Lisa S.A.Q. FAQ Lisa

The Legacy of Lisa
(<http://members.lsol.net/lisa/>)
Software FEdit 3.0



version 3.1

Lisa/Macintosh XL Do-it-yourself Guide

(<http://www.cs.dartmouth.edu/~woz/lisatech/>)

Sun Remarketing, Inc Lisa

LisaWorks...a project in progress.

(<http://emulation.net/lisaworks/>)

emulation.net Macintosh Lisa

XLerator Description

(<http://ruby.he.net/~sigma/xlerator.html>)

xxxxxxxxxxxxxxxxxxxx

MacWorks Plus II

(<http://ruby.he.net/~sigma/mwplus2.html>)

xxxxxxxxxxxxxxxxxxxx

*Apple II World : A Resource for Apple II Enthusiasts.
This site is maintained by Sckop / sckop@Apple2World.jp
This file Created 2000/AUG/01, Last updated 2001/JAN/01.*